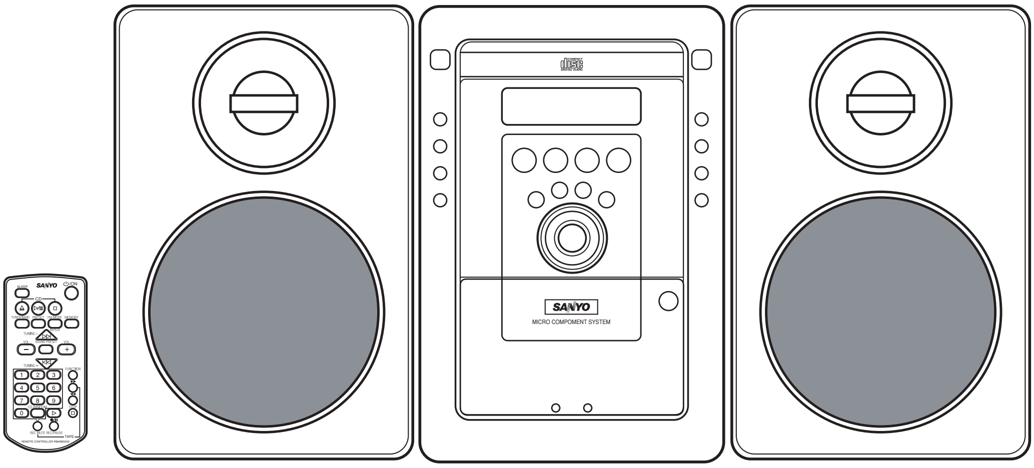
SANYO

FILE NO.

Service Manual

Micro Component System

DC-MM5000(SL) (XE)
DC-MM5000(WH) (XE)
DC-MM5000(BK) (XE)



PRODUCT CODE No.
129 652 00(SL)
129 652 09(WH)
129 652 10(BK)

This service manual consists of
"DC-MM5000U(SL)/XE" (Main unit : 129 651 00) &" SX-MM5000(SL)/XE" (Speaker system : 165 066 00),
"DC-MM5000U(WH)/XE" (Main unit : 129 651 09) & "SX-MM5000(WH)/XE" (Speaker system : 165 066 03) and
"DC-MM5000U(BK)/XE" (Main unit : 129 651 10) & "SX-MM5000(BK)/XE" (Speaker system : 165 066 04).

REFERENCE No. SM5810386

LASER BEAM SAFETY PRECAUTION

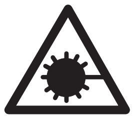
- Pick-up that emits a laser beam is used in this CD player section.

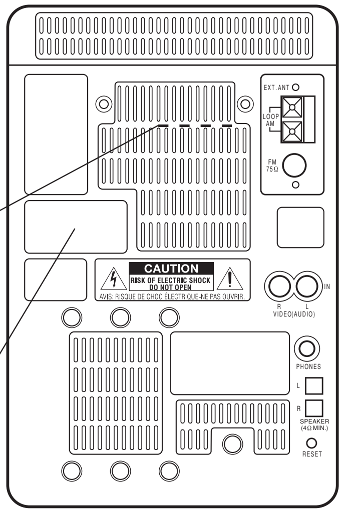
CAUTION :

THIS PRODUCT CONTAINS A LOW POWER LASER DEVICE, TO ENSURE CONTINUED SAFETY DO NOT REMOVE ANY COVERS OR ATTEMPT TO GAIN ACCESS TO THE INSIDE OF THE PRODUCT.
REFER ALL SERVICING TO QUALIFIED PERSONNEL.

LASER OUTPUT .... 0.6 mW Max. (CW)
WAVELENGTH .... 790 nm

CAUTION – INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCKS DEFEATED. AVOID EXPOSURE TO BEAM.
ADVARSEL – USYNLIG LASER STRÅLING VED ÅBNING, NÅR SIKKERHEDSAFBRYDERE ER UDE AF FUNKTION, UNDGÅ UDS ÆTTELSE FOR STRÅLING.
VARNING – OSYNLIG LASER STRÅLNING NÄR DENNA DEL ÄR ÖPPNAD OCH SPÄRR ÄR URKOPPLAD. STRÅLEN ÄR FARLIG.
VORSICHT – UNSICHTBARE LASERSTRAHLUNG TRITT AUS, WENN DECKEL GEÖFFNET UND WENN SICHERHEITSVERRIEGELUNG ÜBERBRÜCKT IST. NICHT, DEM STRAHL AUSSETZEN.
VARO – AVATTAESSA JA SUOJALUKITUS OHITETTAESSA OLET ALTTIINA NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLE. ÄLÄ KATSO SÄTEESEEN.





CLASS 1 LASER PRODUCT
LUOKAN 1 LASERLAITE
KLASS 1 LASERAPPARAT

CD PICK-UP MAINTENANCE

About pick-up (Optical lens) Cleaning

Clean a lens with swab of the cotton which moistened it with alcohol, cleaning paper or cleaning disc appointed.

Specified cleaning disc : LC-1 (Part code : 645 026 1961 ..... manufactured by SANYO.)

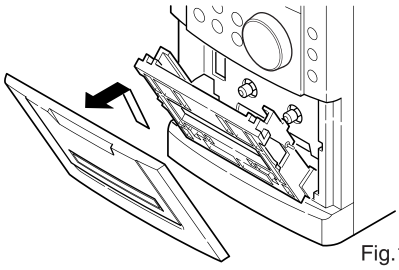
Show a clean procedure in the following in reference by swab of cotton.

1. Cotton swab is wrapped with Cleaning paper.
2. Add the isopropyl alcohol.
3. Gently move the tip of cotton swab just like a draw a whirlpool from inside to outside on the surface of lens.

TAPE ADJUSTMENTS

1. Azimuth Adjustment

- Be sure to clean the heads before attempting to make any adjustment.
- Be sure both channels (1 and 2) are the same level.
  (Using a dual-channel oscilloscope)
- Be sure both channel's waveform are same for the phase matching.
- After completion of the adjustment, use the threadlock (TB-1401B) to secure the azimuth adjustment screws.


Fig.1

1. Remove the cover deck as Fig.1.
2. Load a test tape (VTT-738 etc. : 10kHz) in the Deck.
3. Press the PLAY button. (Normal playback)
4. Use a + tip screwdriver to turn the screw for normal azimuth adjustment so that the left and right outputs are maximized at the same phase during normal playback. See Fig.2.
5. Adjust so that the waveforms for the left and right channels are in alignment.

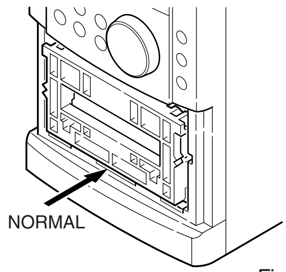


Fig.2

2. Tape Speed Adjustment

- Connect the Frequency Counter to TAPE OUT.

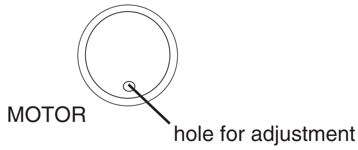


Fig.3

1. Insert the test tape (MTT-111N, etc.; 3,000Hz) into the DECK.
2. Press the PLAY button. .
3. Adjust a hole on the motor bottom so that a frequency counter reading of 3,000 ±5Hz is obtained.See Fig.3.
4. Press the STOP button, and eject the test tape.

3. Torque Measurement

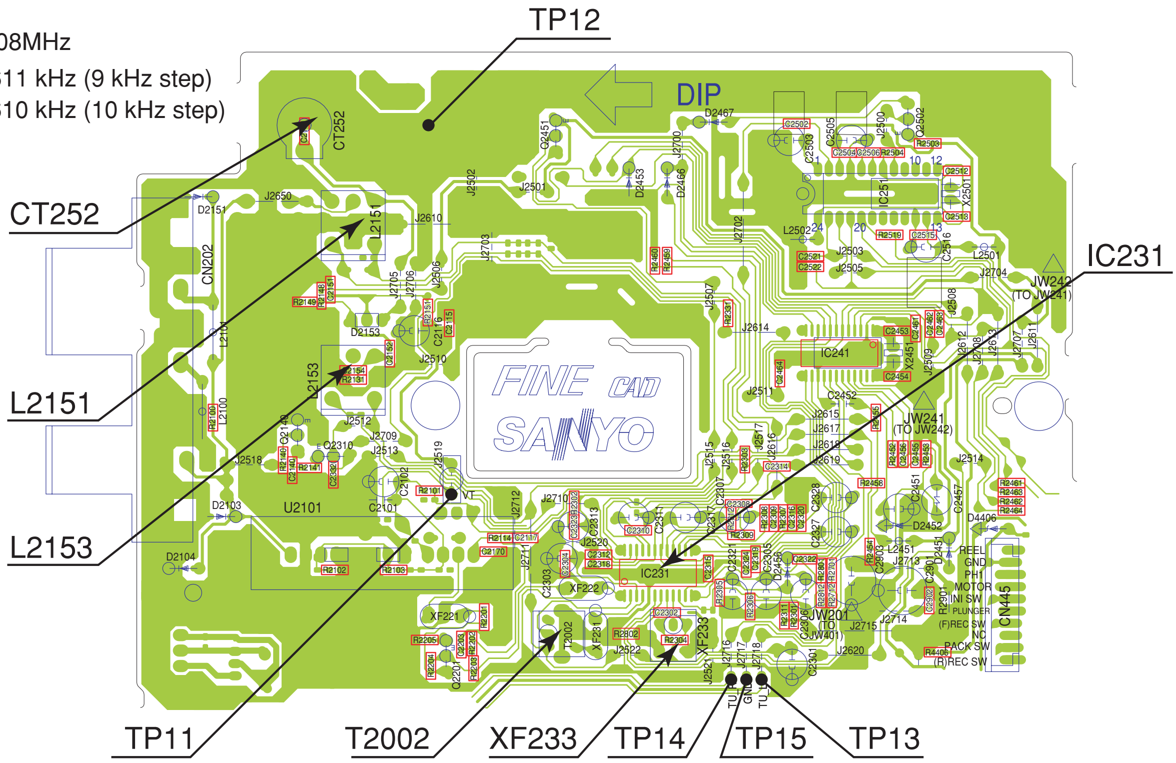
Item	Take-up Torque	Back tention	Pully tention
Test Cassette	PLAY:TW2111A(FWD)	PLAY:TW2112A(FWD)	Driving power cassette: TW-2412(PLAY)
PLAY/REV.	30~65 grcm	2~6 grcm	>50 grcm
F.FWD/REW	55~140 grcm	-	-

TUNER ADJUSTMENTS

- Use a plastic screw driver for adjustments.
- MODE : ST (Stereo)
- Speaker impedance : 4 ohms
- TUNING

  FM : 87.5 - 108MHz

  AM : 522 - 1611 kHz (9 kHz step)
  520 - 1610 kHz (10 kHz step)



Antenna : 75Ω unbalanced, Modulation : 1 kHz
Dev. : ±22.5kHz(MONO), ±22.5kHz(STEREO), ±6.75kHz(PILOT)
RF Level : dBuV EMF
Output Level : about 30mV at TP13, TP14, TP15

1. FM

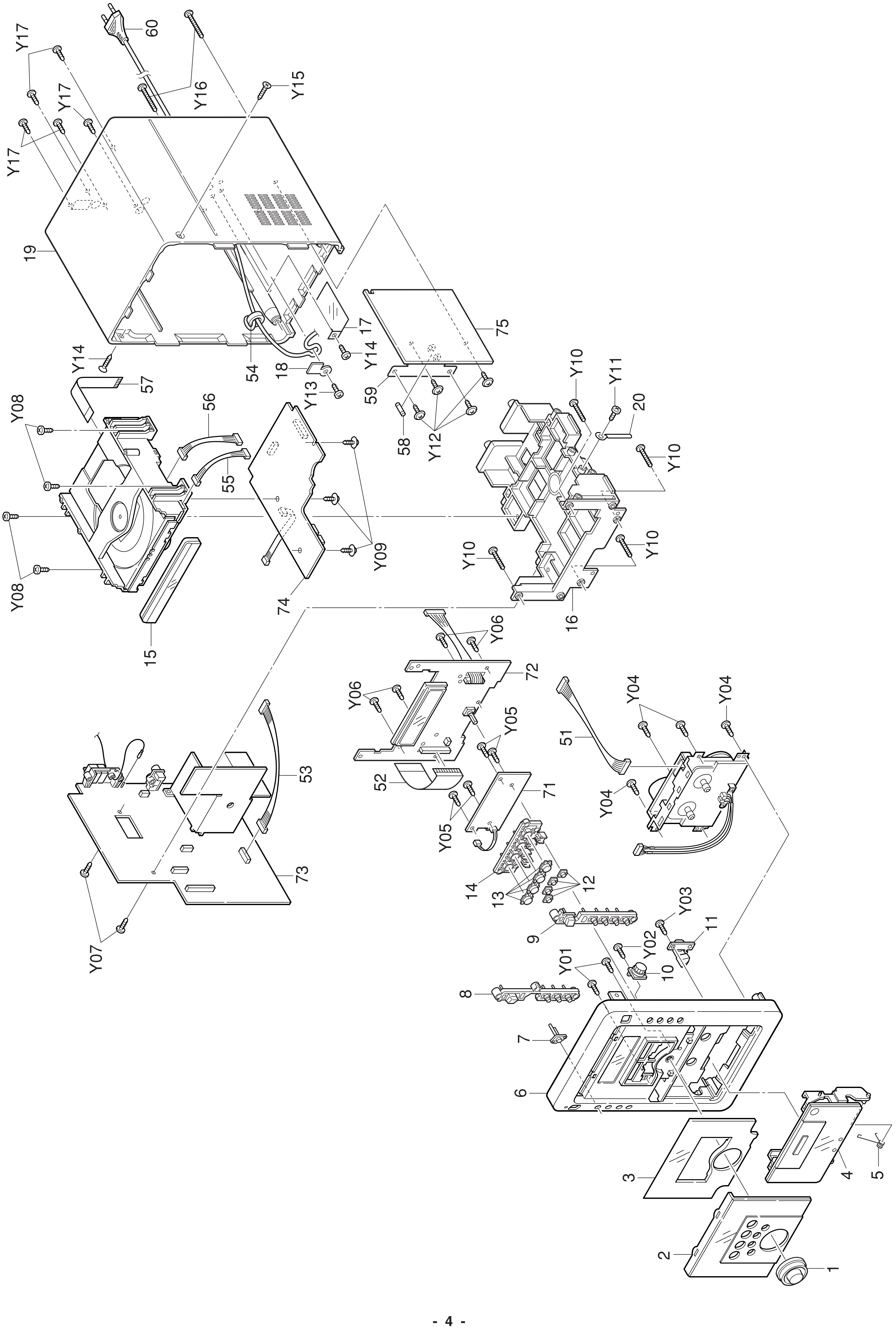
Step	Adjusting Circuit	Connection: Input	Connection: Output	SG Frequency	Adjustment	Remark
1	IF(0V) Adjustment	FM Antenna SG=66dBuV/EMF	Alignment voltage IC231 3-22pin(TP24,25) is 0.0±0.05V	98MHz	XF233	Alignment voltage IC231 3-22pin is 0.0±0.05V
2	Cover Voltage	---	TP11 (H)	87.5MHz	---	1.35±0.10V
			TP12 (E)			
		---		108.0MHz	---	6.50±0.50V Check Only

Anntena : IRE Loop(SG), Moduration : 1kHz 30%
RF Level : dBuV EMF
Output Level : about 30mV at TP13, TP14, TP15

2. AM

Step	Adjusting Circuit	Connection: Input	Connection: Output	SG Frequency	Adjustment	Remark
1	IF Adjustment	Loop Ant	point TP13 (L)	450KHz at 999kHz	T2002	Maximum
			TP14 (R)			
			TP15 (E)			
2	Cover Voltage	---	TP11(H)	522kHz	L2153	1.00±0.05V
			TP12(E)			
		---		1611kHz		7.10±0.50V Check Only
3	Tracking	Loop Ant	point TP13 (L)	603kHz	L2151	Maximum
			TP14 (R)			
			TP15 (E)	1404kHz	CT252	

EXPLODED VIEW (CABINET & CHASSIS)



PARTS LIST

PRODUCT SAFETY NOTICE

EACH PRECAUTION IN THIS MANUAL SHOULD BE FOLLOWED DURING SERVICING. COMPONENTS IDENTIFIED WITH THE IEC SYMBOL ⚠ IN THE PARTS LIST AND THE SCHEMATIC DIAGRAM DESIGNATED COMPONENTS IN WHICH SAFETY AND PERFORMANCE CAN BE OF SPECIAL SIGNIFICANCE. WHEN REPLACING A COMPONENT IDENTIFIED BY ⚠, USE ONLY THE REPLACEMENT PARTS DESIGNATED, OR PARTS WITH THE SAME RATINGS OF RESISTANCE, WATTAGE OR VOLTAGE THAT ARE DESIGNATED IN THE PARTS LIST IN THIS MANUAL. LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS MUST BE MADE TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE PRODUCT TO THE CUSTOMER.

CAUTION : Regular type resistors and capacitors are not listed. To know those values, refer to the schematic diagram.
Regular type resistors are less than 1/4 W carbon type and 0 ohm chip resistors.
Regular type capacitors are less than 50 V and less than 1000 μF type of Ceramic type and Electrical type.

N.S.P : Not available as service parts.

PACKING & ACCESSORIES

REF.NO.	PART NO.	DESCRIPTION
	614 325 3235	CARTON CASE
	614 325 3242	CUSHION,REAR
	614 325 3259	CUSHION,FRONT
	614 325 3266	INSTRUCTION MANUAL
	614 326 0554	INSTRUCTION SHEET
	645 059 7572	POLY SHEET-0430X0340*NC,SET
	645 042 3628	POLY BAG-0150X0500*NC,AC CORD
	645 046 8322	ASSY,ANTENA,LOOP
or	645 005 1227	ASSY,ANTENA,LOOP
	614 308 5515	ANT
or	614 229 4635	ANT
	614 325 2900	ASSY,BOX,SPEAKER(L,R)(For SL)
	614 326 5993	ASSY,BOX,SPEAKER(L,R)(For WH)
	614 326 6006	ASSY,BOX,SPEAKER(L,R)(For BK)
	614 326 4255	LID,BATTERY REMOCON,SERVICE
	645 059 4847	REMOCON,RB-MM5000

CABINET & CHASSIS

REF.NO.	PART NO.	DESCRIPTION
1	614 325 3181	KNOB,VOLUME
2	614 325 2924	ASSY,DEC,PANEL(For SL & WH)
2	614 326 6099	ASSY,DEC,PANEL(For BK)
3	614 325 3051	DEC,WINDOW,INNER
4	614 325 2931	ASSY,LID,CASSETTE(For SL & WH)
4	614 326 6112	ASSY,LID,CASSETTE(For BK)
5	614 325 3228	SPRING,LID,CASSETTE
6	614 325 2948	ASSY,PANEL,FRONT(For SL)
6	614 326 6136	ASSY,PANEL,FRONT(For WH)
6	614 326 6143	ASSY,PANEL,FRONT(For BK)
7	614 325 3037	DEC,WINDOW,SENSOR
8	614 325 2979	BUTTON,POWER,4 KEYS(For SL)
8	614 326 1124	BUTTON,POWER,4 KEYS(For WH)
8	614 326 6181	BUTTON,POWER,4 KEYS(For BK)
9	614 325 2993	BUTTON,OPEN,5 KEYS(For SL)
9	614 326 1131	BUTTON,OPEN,5 KEYS(For WH)
9	614 326 6198	BUTTON,OPEN,5 KEYS(For BK)
10	614 309 8270	ASSY,GEAR,LID,CASSETTE
11	614 303 1277	LATCH,CAM,DECK,DOOR,LOCKING
12	614 325 3082	DEC,BUTTON,FUNCTION
13	614 325 3129	DEC,BUTTON,FUNCTION
14	614 325 2986	BUTTON,FUNCTION,8 KEY
15	614 326 6075	ASSY,COVER CD,DOOR (For SL & BK)
15	614 326 0288	ASSY,COVER CD,DOOR(For WH)
16	614 325 3204	MOUNTING,CD
17	614 326 4156	SHIELD
18	614 316 1172	STOPPER
19	614 325 2917	ASSY,CABINET,REAR(For SL)
19	614 326 6051	ASSY,CABINET,REAR(For WH)
19	614 326 6068	ASSY,CABINET,REAR(For BK)
20	614 129 9136	LUG,CD-MECHA

FIXING PARTS

REF.NO.	PART NO.	DESCRIPTION
Y01	411 021 3503	SCR S-TPG BIN 3X10, F-PANEL+DEC,WINDOW,FL
Y02	411 021 3503	SCR S-TPG BIN 3X10, F-PANEL+ASSY,GEAR
Y03	411 021 3503	SCR S-TPG BIN 3X10, F-PANEL+LATCH,CAM
Y04	411 021 3503	SCR S-TPG BIN 3X10, F-PANEL+MECHA,DECK
Y05	411 021 3503	SCR S-TPG BIN 3X10, F-PANEL+BUTTON,FUNCTION
Y06	411 021 3503	SCR S-TPG BIN 3X10, F-PANEL+FRONT,PCB
Y07	411 021 3503	SCR S-TPG BIN 3X10, MTG CD+MAIN PCB
Y08	411 021 3503	SCR S-TPG BIN 3X10, MTG CD+CD MECHA
Y09	411 020 9902	SCR S-TPG BRZ+FLG 3X8, MECHA CD+CD PCB
Y10	411 021 4500	SCR S-TPG BIN 3X16, MTG CD+F,PANEL
Y11	411 021 6405	SCR S-TPG BIN 3X8,CD-MECHA
Y12	411 020 9100	SCR S-TPG BRZ+FLG 3X12, REAR+P-TRANS
Y13	411 021 4005	SCR S-TPG BIN 3X12, REAR+STOPPER
Y14	411 020 9902	SCR S-TPG BRZ+FLG 3X8, REAR+SHIELD
Y15	411 098 7800	SCR S-TPG FLT 3X12, MTG CD+C,REAR(L/R)
Y16	411 021 4906	SCR S-TPG BIN 3X20, C-REAR+F-PANEL
Y17	411 021 3404	SCR S-TPG BIN 3X10, MTG CD+C,REAR , C-REAR(ANT TERMINAL), C-REAR+VIDEO IN

ELECTRICAL PARTS

REF.NO.	PART NO.	DESCRIPTION
51	614 322 2279	ASSY,WIRE,TAPE MECHA-AMP
52	614 326 3760	FLEXIBLE FLAT CABLE,FR-AMP
or	614 327 0874	FLEXIBLE FLAT CABLE,FR-AMP
53	614 326 6150	ASSY,WIRE,DG-AMP
54	645 051 0649	CORE,FERRITE,EMC
or	645 031 7637	CORE,FERRITE,EMC
55	614 326 3739	ASSY,WIRE,CD-LOAD
56	614 326 3722	ASSY,WIRE,CD-MOTOR
57	614 326 3647	FLEXIBLE FLAT CABLE,CD-PICK UP
or	614 327 0850	FLEXIBLE FLAT CABLE,CD-PICK UP
58	⚠423 016 8103	FUSE 250V 4A,PT SEC
59	⚠645 057 5693	TRANS,POWER
60	⚠645 016 9939	CORD,POWER-1.74MK

PARTS LIST

KEYBOARD P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
71	614 325 3617	ASSY,PWB,KEYBOARD (Only Initial)
CN650	614 326 6174	ASSY,WIRE,KEYBOARD-FRONT
CN653	614 035 4911	SOCKET,DIP 2P
S6510	614 240 1002	SWITCH,TACT
or	645 006 5958	SWITCH,PUSH 1P-1T
or	614 220 5471	SWITCH,TACT
S6511	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6512	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6513	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6514	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
or	645 006 5958	SWITCH,PUSH 1P-1T
S6515	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6516	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6517	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
or	645 006 5958	SWITCH,PUSH 1P-1T

FRONT P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
72	614 325 2061	ASSY,PWB,FRONT (For SL) (Only Initial)
72	614 326 6808	ASSY,PWB,FRONT (For WH & BK) (Only Initial)
BR601	614 325 4249	HOLDER,FL
BR602	614 325 4256	HOLDER,LED
BR603	614 325 4256	HOLDER,LED
C6011	403 262 8607	DL-ELECT 0.047F Z 5.5V
or	403 304 4802	DL-ELECT 0.047F Z 5.5V
CN601	645 009 8482	SOCKET,FFC 28P,FRONT-AMP
or	645 012 5324	SOCKET,FPC 28P,FRONT-AMP
CN602	645 005 7366	PLUG,2P
or	614 310 2434	PLUG,2P
CN611	614 324 4646	ASSY,WIRE,FRONT-CD
D6010	407 012 4406	DIODE 1SS133
D6110	407 012 4406	DIODE 1SS133
D6111	407 012 4406	DIODE 1SS133
D6112	407 012 4406	DIODE 1SS133
D6115	407 099 4603	ZENER DIODE MTZJ3.9B
D6320	407 231 7806	LED AMBER LT6E34-81-URC1, BACK LIGHT(For SL)
D6320	407 231 7905	LED BLUE LT6EB3-81-SBE1, BACK LIGHT(For WH & BK)
D6321	407 231 7806	LED AMBER LT6E34-81-URC1, BACK LIGHT(For SL)
D6321	407 231 7905	LED BLUE LT6EB3-81-SBE1, BACK LIGHT(For WH & BK)
D6322	407 231 3808	LED LT2P11-81,STAND-BY-LED
FL601	645 057 3149	FLOURESCENT TUBE,FL
IC601	410 469 0600	IC LC866540A-51D1,MICON
L6010	645 001 5441	INDUCTOR,2.2U K
Q6101	405 019 3804	TR 2SC536-G-NP
or	405 019 2708	TR 2SC536-F-NP
or	405 141 3208	TR KTC3198-Y
or	405 141 3307	TR KTC3198-GR
Q6107	405 004 5004	TR 2SA608-G-NP
or	405 004 4502	TR 2SA608-F-NP
or	405 141 3505	TR KTA1266-Y
or	405 141 3406	TR KTA1266-GR
Q6108	405 017 9709	TR 2SC3330-U
or	405 017 9600	TR 2SC3330-T
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
or	405 143 8706	TR KTC3199-GR
Q6302	405 143 0007	TR KRC107M
or	405 000 3806	TR DTC114YS
Q6303	405 143 0007	TR KRC107M
or	405 000 3806	TR DTC114YS
Q6304	405 143 0007	TR KRC107M
or	405 000 3806	TR DTC114YS
S6001	645 057 4689	SWITCH,ROTARY(ENCODER)
S6110	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6111	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6112	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6113	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6114	614 220 5471	SWITCH,TACT
or	614 240 1002	SWITCH,TACT
or	645 006 5958	SWITCH,PUSH 1P-1T
S6115	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6116	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6117	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
S6118	645 006 5958	SWITCH,PUSH 1P-1T
or	614 240 1002	SWITCH,TACT
or	614 220 5471	SWITCH,TACT
SE601	407 229 6101	PHOTO DIODE SPS-442-1-G1
or	407 217 1101	PHOTO DIODE SPS-442-1G
X6101	645 032 1627	OSC,CRYSTAL 32.768KHZ
X6102	645 018 6103	OSC,CERAMIC 6.000MHZ
or	645 057 1138	OSC,CERAMIC 6.0MHZ

AMPLIFIER & TUNER P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
73	614 325 2023	ASSY,PWB,AMP-TU (Only Initial)
C2457	403 259 0508	NP-ELECT 1U M 50V
C4601	403 057 3503	POLYESTER 0.1U K 50V
C4605	403 061 3605	POLYESTER 0.039U J 50V
C4606	403 061 7702	POLYESTER 4700P J 50V
C4607	403 059 3204	POLYESTER 2200P J 50V
C4608	403 060 2807	POLYESTER 0.027U K 50V
C4743	403 057 3503	POLYESTER 0.1U K 50V
C4843	403 057 3503	POLYESTER 0.1U K 50V
C4950	403 332 7400	ELECT 2200U M 50V
C4984	403 329 3309	ELECT 2200U M 25V
CN201	645 032 6394	TERMINAL
or	614 255 5750	TERMINAL
CN400	645 009 8482	SOCKET,FFC 28P
or	645 012 5324	SOCKET,FPC 28P
CN440	614 310 2472	PLUG,6P
or	645 005 8127	PLUG,6P
CN441	614 310 2779	PLUG,6P,POWERSOCKET
or	645 004 2928	PLUG,6P,POWERSOCKET
CN445	614 310 2519	PLUG,10P
or	645 005 8158	PLUG,10P
CN450	645 048 6241	JACK,RCA-2,JACK
CN455	645 011 6384	JACK,PHONE D3.6,HEADPHONE
CN456	645 006 1875	PLUG,2P,SPEAKER
CN457	645 006 1875	PLUG,2P,SPEAKER

PARTS LIST

REF.NO.	PART NO.	DESCRIPTION
CN480	614 310 2465	PLUG,5P
or	645 005 9292	PLUG,5P
CT252	645 032 5663	TRIMMER,7PF
D2103	407 012 4406	DIODE 1SS133
D2104	407 012 4406	DIODE 1SS133
D2151	407 012 4406	DIODE 1SS133
D2153	407 105 1602	VARACTOR DI SVC342M-V
or	407 105 1305	VARACTOR DI SVC342L-V
D2451	407 012 4406	DIODE 1SS133
D2452	407 153 7502	ZENER DIODE GZS3.0B
D2453	407 012 4406	DIODE 1SS133
D2456	407 012 4406	DIODE 1SS133
D2466	407 012 4406	DIODE 1SS133
D2467	407 012 4406	DIODE 1SS133
D4320	407 099 4603	ZENER DIODE MTZJ3.9B
D4321	407 012 4406	DIODE 1SS133
D4341	407 012 4406	DIODE 1SS133
D4342	407 012 4406	DIODE 1SS133
D4343	407 012 4406	DIODE 1SS133
D4344	407 012 4406	DIODE 1SS133
D4345	⚠407 099 9509	ZENER DIODE MTZJ30B
D4348	407 099 5204	ZENER DIODE MTZJ5.1B
D4406	407 099 5204	ZENER DIODE MTZJ5.1B
D4500	407 012 4406	DIODE 1SS133
D4960	407 012 4406	DIODE 1SS133
D4991	407 099 6805	ZENER DIODE MTZJ13B
D4992	⚠407 099 6102	ZENER DIODE MTZJ10B
D4993	407 012 4406	DIODE 1SS133
D4994	⚠407 098 3300	DIODE RL153-BF-S2
D4998	407 012 4406	DIODE 1SS133
HS401	614 325 3167	HEAT SINK
IC231	409 474 3201	IC LA1844ML
IC241	409 439 4502	IC LC72121M-D
IC251	409 447 3900	IC LC72722
IC440	409 451 7406	IC AN7348K
IC441	409 474 6103	IC LC75342M
IC442	⚠409 441 6402	IC TDA7265
IC443	409 189 3404	IC BA7755A
IC446	⚠409 169 7804	IC NJM78M05FA
L2100	⚠645 037 2858	CORE,PIPE
L2101	⚠645 037 2858	CORE,PIPE
L2151	645 058 8792	TRANS,ANT,796KHZ
or	645 037 2377	TRANS,ANT,796KHZ
L2153	645 040 2739	TRANS,OSC,796KHZ
or	645 058 8822	TRANS,OSC,796KHZ
L2451	645 031 7842	INDUCTOR,100U K
or	645 001 4581	INDUCTOR,100U K
L2501	645 031 7842	INDUCTOR,100U K
or	645 001 4581	INDUCTOR,100U K
L2502	645 031 7842	INDUCTOR,100U K
or	645 001 4581	INDUCTOR,100U K
L4600	645 006 1523	INDUCTOR,470U J
L4601	645 006 1523	INDUCTOR,470U J
L4602	645 037 2858	CORE,PIPE
L4603	645 006 1523	INDUCTOR,470U J
L4604	645 037 2858	CORE,PIPE
L4781	645 006 9864	INDUCTOR,80U
L4881	645 006 9864	INDUCTOR,80U
LUG45	614 129 9068	LUG
LUG46	614 129 9082	LUG
PR436	⚠645 014 2475	PROTECTOR,0.75A 125V
PR495	⚠645 014 2505	PROTECTOR,0.8A 125V
PR496	⚠645 014 2529	PROTECTOR,1.25A 125V
Q2140	405 020 7402	TR 2SC945A-P
or	405 020 7204	TR 2SC945A-K
or	405 019 3705	TR 2SC536-G-AUD-SPA
or	405 017 9709	TR 2SC3330-U
or	405 017 9600	TR 2SC3330-T
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
or	405 143 8706	TR KTC3199-GR
Q2201	405 016 0806	TR 2SC2839-E
or	405 151 4103	TR KTC3193-Y
or	405 151 4202	TR KTC3193-O

REF.NO.	PART NO.	DESCRIPTION
Q2310	405 017 9709	TR 2SC3330-U
or	405 017 9600	TR 2SC3330-T
or	405 011 8609	TR 2SC1740S-S
or	405 011 8500	TR 2SC1740S-R
or	405 143 8706	TR KTC3199-GR
Q2451	405 078 2404	TR BN1A4P
or	405 000 0904	TR DTA114YS
or	405 036 3702	TR 2SA1564
or	405 151 5209	TR KRA107M
Q2502	405 036 3702	TR 2SA1564
or	405 151 5209	TR KRA107M
or	405 000 0904	TR DTA114YS
or	405 078 2404	TR BN1A4P
Q4320	405 141 3406	TR KTA1266-GR
or	405 141 3505	TR KTA1266-Y
or	405 004 4502	TR 2SA608-F-NP
or	405 004 5004	TR 2SA608-G-NP
Q4321	405 141 3406	TR KTA1266-GR
or	405 141 3505	TR KTA1266-Y
or	405 004 4502	TR 2SA608-F-NP
or	405 004 5004	TR 2SA608-G-NP
Q4345	405 143 0007	TR KRC107M
or	405 000 3806	TR DTC114YS
Q4346	405 155 0002	TR MPSA56
Q4410	405 155 0002	TR MPSA56
Q4501	405 078 2404	TR BN1A4P
or	405 000 0904	TR DTA114YS
or	405 151 5209	TR KRA107M
or	405 036 3702	TR 2SA1564
Q4502	405 000 3806	TR DTC114YS
or	405 143 0007	TR KRC107M
Q4600	405 155 0002	TR MPSA56
Q4601	405 000 3806	TR DTC114YS
or	405 143 0007	TR KRC107M
Q4602	405 141 3307	TR KTC3198-GR
or	405 141 3208	TR KTC3198-Y
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q4603	405 141 3307	TR KTC3198-GR
or	405 141 3208	TR KTC3198-Y
or	405 019 2708	TR 2SC536-F-NP
or	405 019 3804	TR 2SC536-G-NP
Q4700	405 143 0007	TR KRC107M
or	405 000 3806	TR DTC114YS
Q4800	405 000 3806	TR DTC114YS
or	405 143 0007	TR KRC107M
Q4960	405 155 0002	TR MPSA56
Q4961	405 155 0002	TR MPSA56
Q4962	405 000 3806	TR DTC114YS
or	405 143 0007	TR KRC107M
Q4963	405 000 3806	TR DTC114YS
or	405 143 0007	TR KRC107M
Q4990	⚠405 138 6403	TR KTD2058Y
or	⚠405 095 1602	TR 2SD2061-E
or	⚠405 095 1701	TR 2SD2061-F
Q4991	⚠405 138 6403	TR KTD2058Y
or	⚠405 095 1602	TR 2SD2061-E
or	⚠405 095 1701	TR 2SD2061-F
Q4992	405 141 3703	TR KTA1271-Y
or	405 008 2405	TR 2SB698-F
or	405 008 2504	TR 2SB698-G
Q4993	405 141 3703	TR KTA1271-Y
or	405 008 2504	TR 2SB698-G
or	405 008 2405	TR 2SB698-F
Q4994	405 000 3806	TR DTC114YS
or	405 143 0007	TR KRC107M
R4340	⚠402 081 1004	FUSIBLE RES 10 JA 1/4W
R4743	402 071 1304	FUSIBLE RES 2.2 JA 1/4W
R4843	402 071 1304	FUSIBLE RES 2.2 JA 1/4W
S0001	614 326 7386	SHIELD,PLATE
S4901	614 215 9828	SWITCH,TACT
SA401	411 021 6405	SCR S-TPG BIN 3X8,HEAT SINK
SA402	411 021 6405	SCR S-TPG BIN 3X8,HEAT SINK
SA403	411 021 6405	SCR S-TPG BIN 3X8,HEAT SINK

PARTS LIST

REF.NO.	PART NO.	DESCRIPTION
SA404	411 021 6405	SCR S-TPG BIN 3X8,HEAT SINK
SA405	411 021 6405	SCR S-TPG BIN 3X8,HEAT SINK
T2002	645 046 2023	FILTER,450KHZ
U2101	645 043 6697	TUNER,FM
X2451	645 023 4965	OSC,CRYSTAL 7.2MHZ
X2501	645 035 8326	OSC,CRYSTAL 4.332MHZ
XF221	645 054 1223	CERAMIC FILTER 10.70MHZ
or	645 010 7665	CERAMIC FILTER 10.70MHZ
or	614 240 2917	FILTER,CERAM
XF222	645 054 1223	CERAMIC FILTER 10.70MHZ
or	645 010 7665	CERAMIC FILTER 10.70MHZ
or	614 240 2917	FILTER,CERAM
XF231	645 041 9324	CERAMIC FILTER 450KHZ
XF233	645 040 9981	TRANS,IF 10.7MHZ
or	645 039 9923	TRANS,IF 10.7MHZ

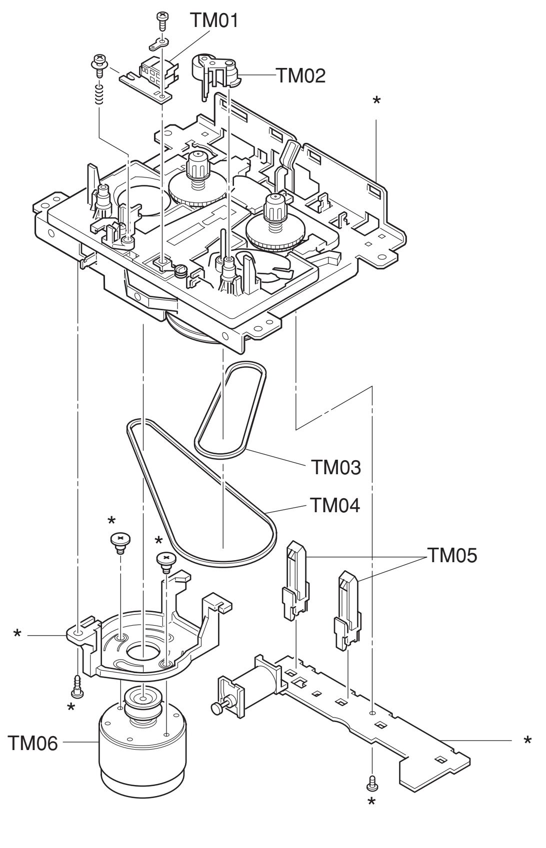
CD P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
74	614 325 2047	ASSY,PWB,CD (Only Initial)
CN111	645 059 0498	SOCKET,FPC 16P
or	645 026 2470	SOCKET,FFC 16P
or	645 033 8168	SOCKET,FPC 16P
CN113	614 310 2625	PLUG,6P
or	645 006 0939	PLUG,6P
CN114	614 310 2618	PLUG,5P
or	645 006 0922	PLUG,5P
CN122	614 310 2533	PLUG,12P
or	645 006 0878	PLUG,12P
CN123	614 035 4942	SOCKET,DIP 5P
CN162	614 326 6167	ASSY,WIRE,CD-AMP
D1371	407 099 5105	ZENER DIODE MTZJ4.7B
D1401	407 012 4406	DIODE 1SS133
or	407 012 5809	DIODE 1SS176
D1402	407 012 4406	DIODE 1SS133
or	407 012 5809	DIODE 1SS176
D1403	407 012 5809	DIODE 1SS176
or	407 012 4406	DIODE 1SS133
D1480	407 012 4406	DIODE 1SS133
or	407 012 5809	DIODE 1SS176
D1601	⚠407 148 6701	DIODE 1A3-I
D1881	407 099 5204	ZENER DIODE MTZJ5.1B
IC101	409 503 5701	IC LA9242M-MPB
IC102	409 539 9704	IC LC78629E
IC103	⚠409 486 8706	IC MM1469XH
IC132	⚠409 408 1303	IC LB1641L
L1451	645 001 4550	INDUCTOR,10U K
PR101	⚠645 014 2499	PROTECTOR,0.4A 125V
PR132	⚠645 042 2553	PROTECTOR,0.63A 125V
or	⚠645 014 2468	PROTECTOR,0.63A 125V
Q1301	405 008 7301	TR 2SB810-F
or	405 008 7202	TR 2SB810-E
or	405 008 6809	TR 2SB808-F-SPA
Q1401	⚠405 141 3604	TR KTA1273-Y
or	⚠405 009 5207	TR 2SB927-S
or	⚠405 009 5306	TR 2SB927-T
R1371	⚠402 083 3600	RESISTOR 15 J- 2W
X1451	614 231 2667	RESONATOR
or	645 057 1145	OSC,CERAMIC 16.93MHZ

POWER SUPPLY P.W.BOARD ASSY

REF.NO.	PART NO.	DESCRIPTION
75	614 325 2030	ASSY,PWB,DG (Only Initial)
CN411	614 017 8203	TERMINAL BOARD
CN412	614 017 8203	TERMINAL BOARD
CN415	645 006 4760	HOLDER,FUSE,FUSEHOLDER
or	645 031 7903	HOLDER,FUSE,FUSEHOLDER
CN416	645 006 4760	HOLDER,FUSE,FUSEHOLDER
or	645 031 7903	HOLDER,FUSE,FUSEHOLDER
CN420	645 004 2928	PLUG,6P,POWERSOCKET
or	614 310 2779	PLUG,6P,POWERSOCKET
D4280	⚠407 196 5800	DIODE 1N5402BD82
D4281	⚠407 196 5800	DIODE 1N5402BD82
D4282	⚠407 196 5800	DIODE 1N5402BD82
D4283	⚠407 196 5800	DIODE 1N5402BD82
D4284	⚠407 098 3300	DIODE RL153-BF-S2
L4191	⚠645 038 6053	INDUCTOR,181U
or	⚠645 041 3087	INDUCTOR,180U
PR420	⚠645 014 2567	PROTECTOR,2.5A 125V

EXPLODED VIEW & PARTS LIST(TAPE MECHANISM)

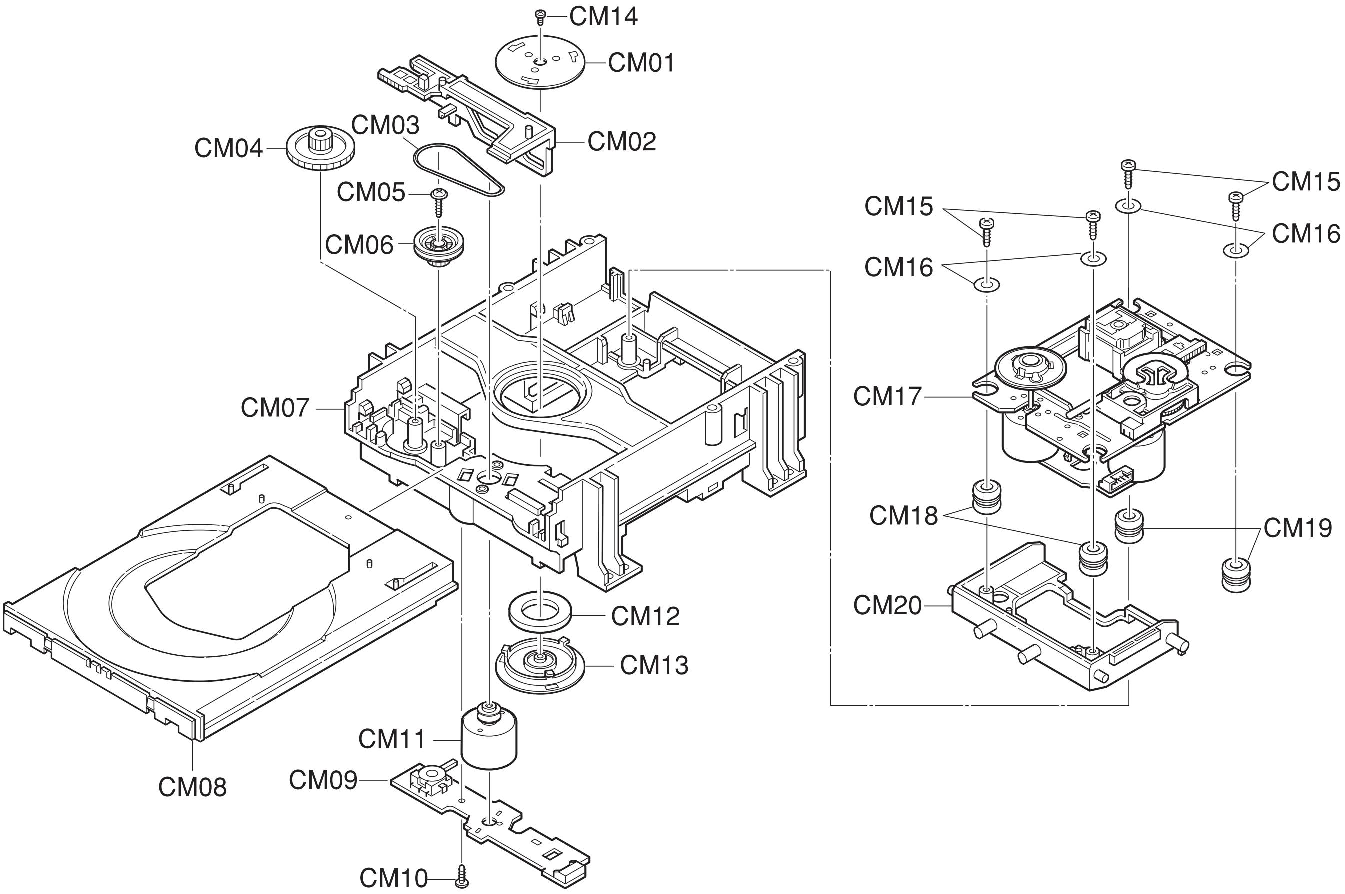


TAPE MECHANISM

REF.NO.	PART NO.	DESCRIPTION
	614 320 4213	ASSY,MECHA,TM-DA280TN-SH
TM01	645 052 2888	RP HEAD C-9142-BD-1025
TM02	645 010 9447	PINCH ROLLER(F) ASSY
TM03	645 045 1959	RF BELT
TM04	645 052 4158	MAIN BELT
TM05	645 045 2048	DETECT SWITCH MXS01190
TM06	645 052 2864	ASSY,MOTOR

* N.S.P : Not supplied as service parts.

EXPLODED VIEW & PARTS LIST(CD MECHANISM)



CD MECHANISM

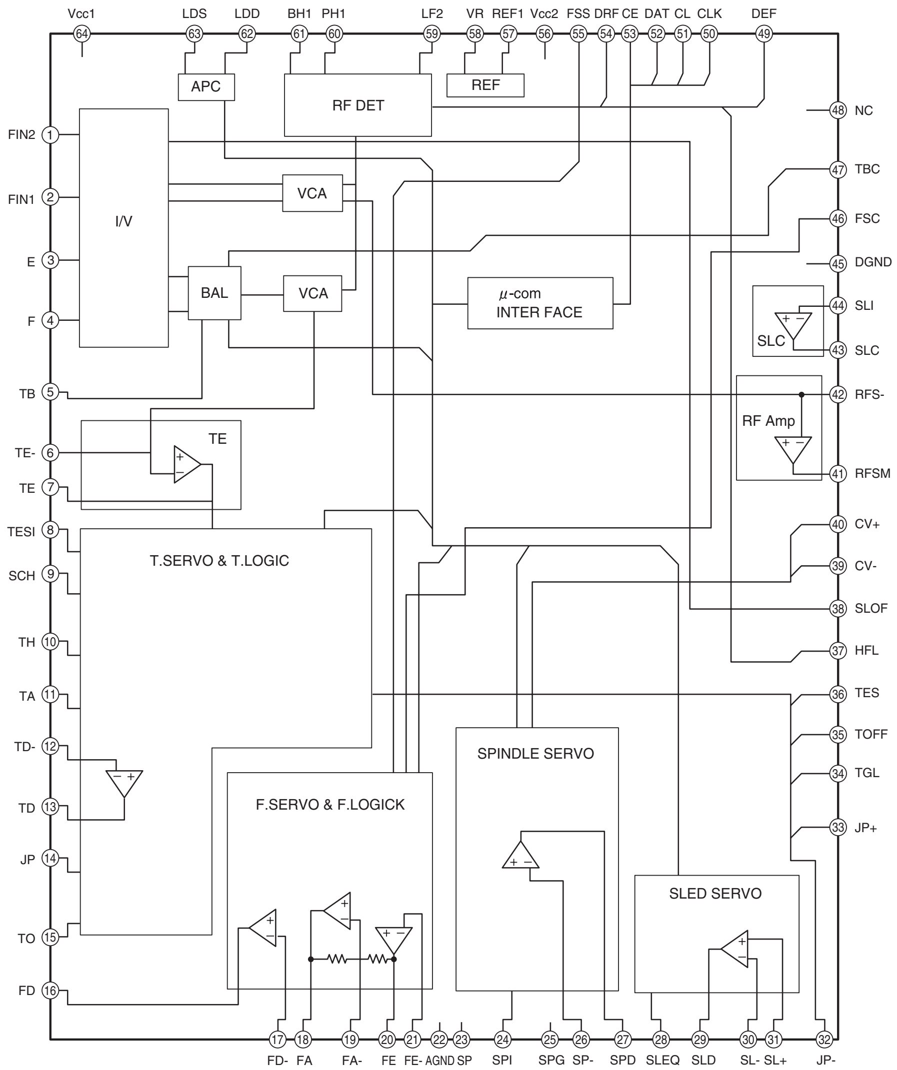
REF.NO.	PART NO.	DESCRIPTION
	614 325 7462	ASSY,MECHA,CD-MM5000-SH, CD MECHA
CM01	614 233 0227	PLATE,BACK YOKE
CM02	614 320 2356	SLIDE,BASE UP/DOWN
CM03	614 323 3923	BELT,SQUARE,LOADING
CM04	614 324 5230	GEAR,LOADING
or	614 320 2271	GEAR,LOADING
CM05	412 061 7803	SPECIAL SCREW,PULLEY FIX
CM06	614 320 2349	PULLEY,LOADING RETARD PULLY
CM07	614 326 4811	CHASSIS,MECHA
CM08	614 320 2363	TRAY
CM10	411 021 2704	SCR S-TPG BIN 2.6X6,PWB MECHA IF FIX
CM11	645 032 4352	ASSY,MOTOR LOADING
CM12	614 262 8928	MAGNET,CHUCK
or	645 057 8618	MAGNET,CHUCK
CM13	614 318 9398	HOLDER,CHUCK HOLDER
CM14	411 162 1901	SCR S-TPG PAN PCS 2X3, CHUCK HOLDER FIX
CM15	411 021 1806	SCR S-TPG BIN 2.6X10,BASE FIX
CM16	411 092 0906	WASHER Z 2.6X10X0.5,BASE FIX
CM17	614 325 6014	ASSY,MECHA,DA11T3CNSASH, BASE MECHA
CM18	614 310 6128	SPACER,MECHA,MECHA(FRONT)
CM19	614 322 9070	SPACER,MECHA,MECHA(REAR)
CM20	614 325 8391	MOUNTING,BASE MECHA

MECHA SWITCH P.W.BOARD ASSY

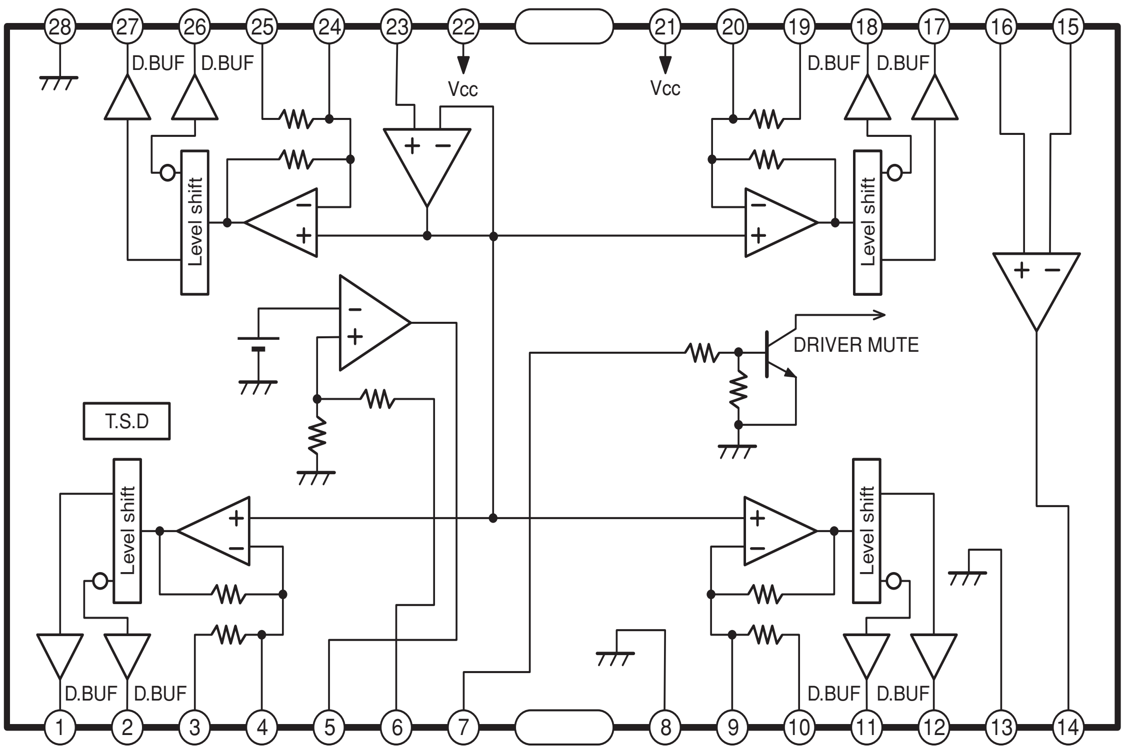
REF.NO.	PART NO.	DESCRIPTION
CM09	614 320 2219	ASSY,PWB MECHA SW, MOTOR & SW PWB
CN001	614 310 2618	PLUG,5P,MOTOR & SW PWB CONNE
or	645 006 0922	PLUG,5P,MOTOR & SW PWB CONNE
S0001	645 057 5785	SWITCH,LEVER,MECHA SW

IC BLOCK DIAGRAM & DESCRIPTION

IC101 LA9242M-MPB (Servo Processing Signal for a CD Player)

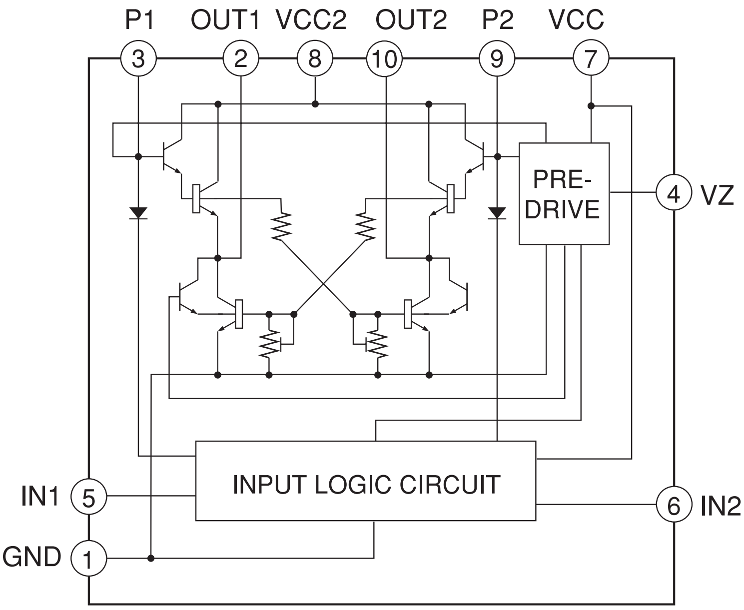


IC103 MM1469XH (CD Driver)



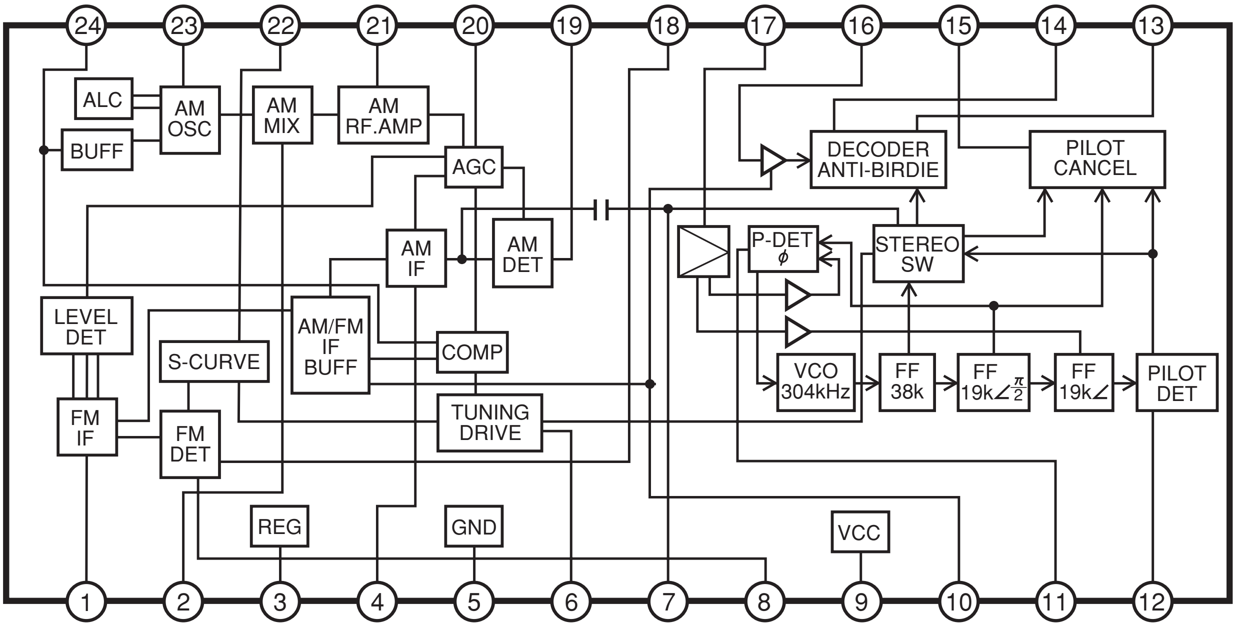
IC BLOCK DIAGRAM & DESCRIPTION

IC132 LB1641L (Bidirectional Motor Driver)

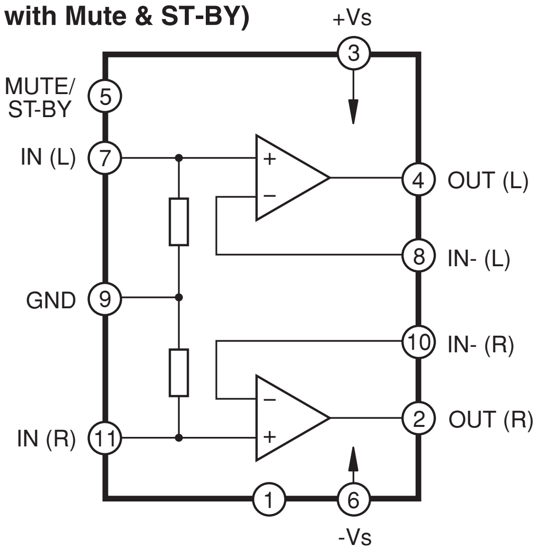


Input		Output		Action
IN1	IN2	OUT1	OUT2	
0	0	0	0	Brake
1	0	1	0	Normal(Reverse) Rotary
0	1	0	1	Reverse(Normal) Rotary
1	1	0	0	Brake

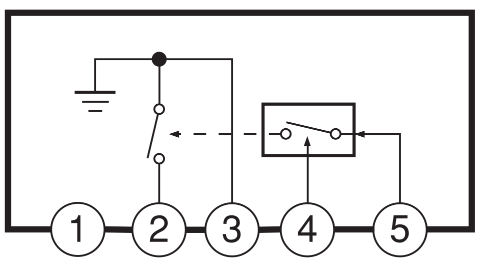
IC231 LA1844ML (Electronic Tuning-supported Home Audio Tuner IC)



IC442 TDA7265 (25+25W Stereo Amplifier with Mute & ST-BY)

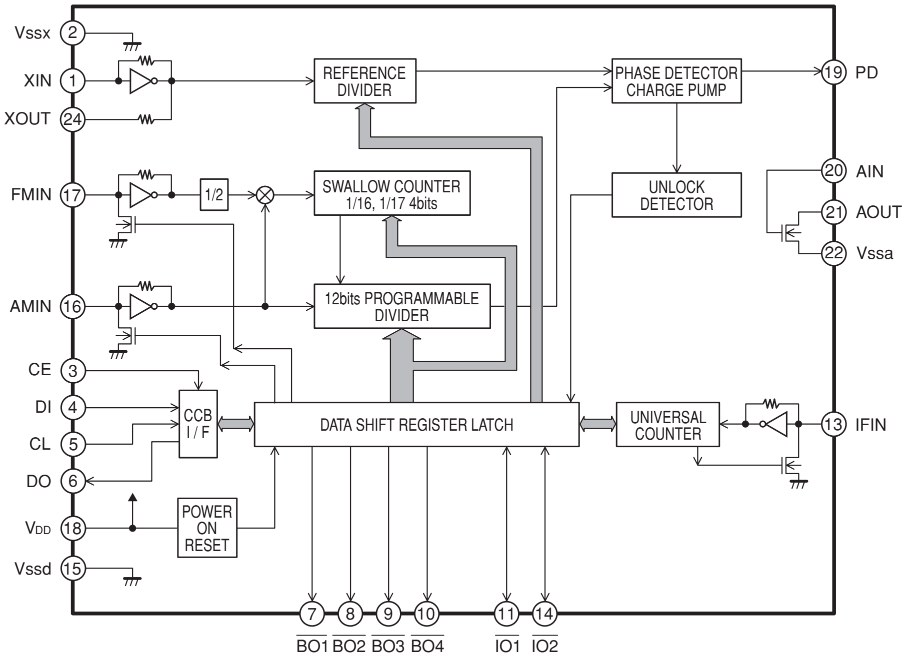


IC443 BA7755A (Rec/Play Switch)

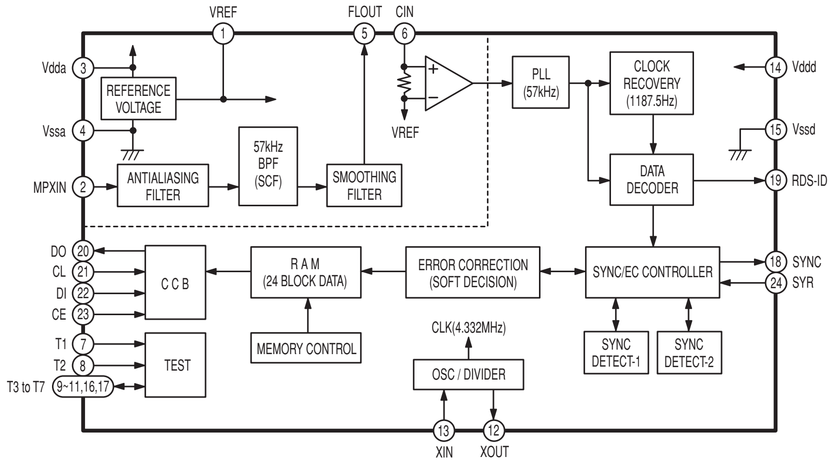


IC BLOCK DIAGRAM & DESCRIPTION

IC241 LC72121M-D (PLL Synthesizer)



IC251 LC72722 (RDS Signal Processor)

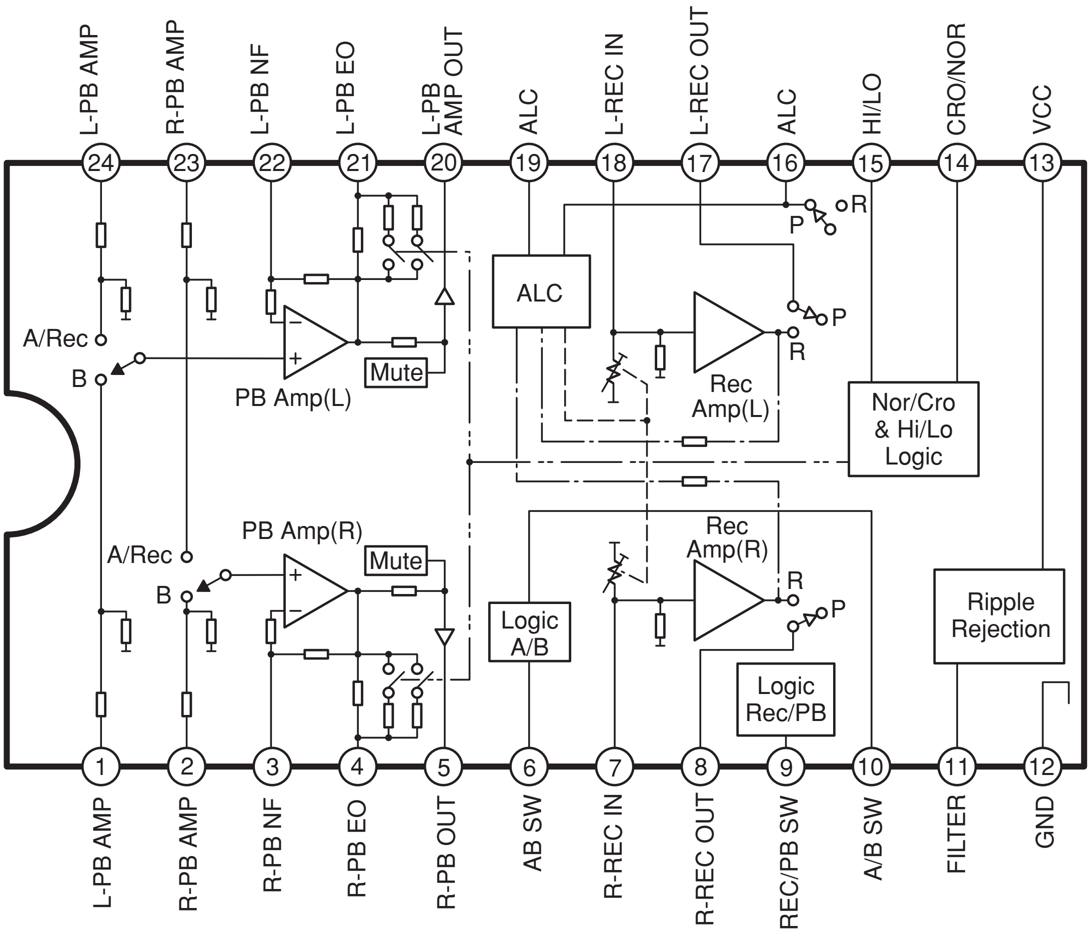


Pin No.	Pin name	Function	I/O
1	VREF	Reference voltage output (Vdda/2)	O
2	MPXIN	Baseband (multiplexed) signal input	I
5	FLOUT	Subcarrier oitput (filter output)	O
6	CIN	Subcarrier input (comparator input)	I
3	Vdda	Analog power supply (+5V)	-
4	Vssa	Analog ground	-
12	XOUT	Crystal oscillator output (4.332/8.664MHz)	O
13	XIN	Crystal oscillator input (external reference signal input)	
7	T1	Test input (This pin must always be connected to ground.)	
8	T2	Test input (standby control) 0:Normal operation. 1:Standby state (crystal oscillator stopped)	I
9	T3 (RDCL)	Test I/O (RDS clock output)	
10	T4 (RDDA)	Test I/O (RDS data output)	
11	T5 (RSFT)	Test I/O (soft decision control data output)	
16	T6 (ERROR/57K/TP/BE1)	Test I/O (error status, regenceratcd carrier, TP, error block count outputs)	I/O*
17	T7 (CORREC/ARI-ID/TA/BEO)	Test I/O (error corrcction status, SK datection,TA, error block count outputs)	
18	SYNC	Block synchronization output	
19	RDS-ID	RDS datection	O
20	DO	Data output	
21	CL	Clock input — Serial data interface (CCB)	
22	DI	Data input — Serial data interface (CCB)	I
23	CE	Chip enable — Serial data interface (CCB)	
24	SYR	Synchronization and RAM address reset (active high)	
14	Vddd	Digital power supply (+5V)	-
15	Vssd	Digital ground	-

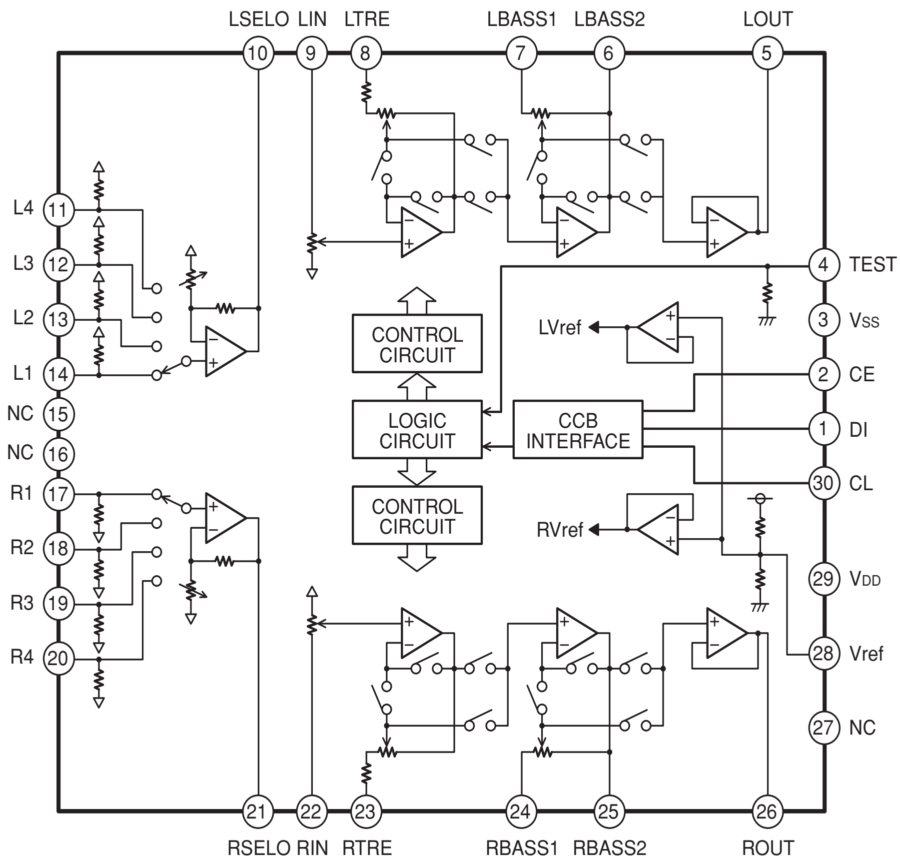
* Normally the output pin. Used as an I/O pin in test mode, which is not available to user applications.

IC BLOCK DIAGRAM & DESCRIPTION

IC440 AN7348K (PLAY/REC Pre Amp)

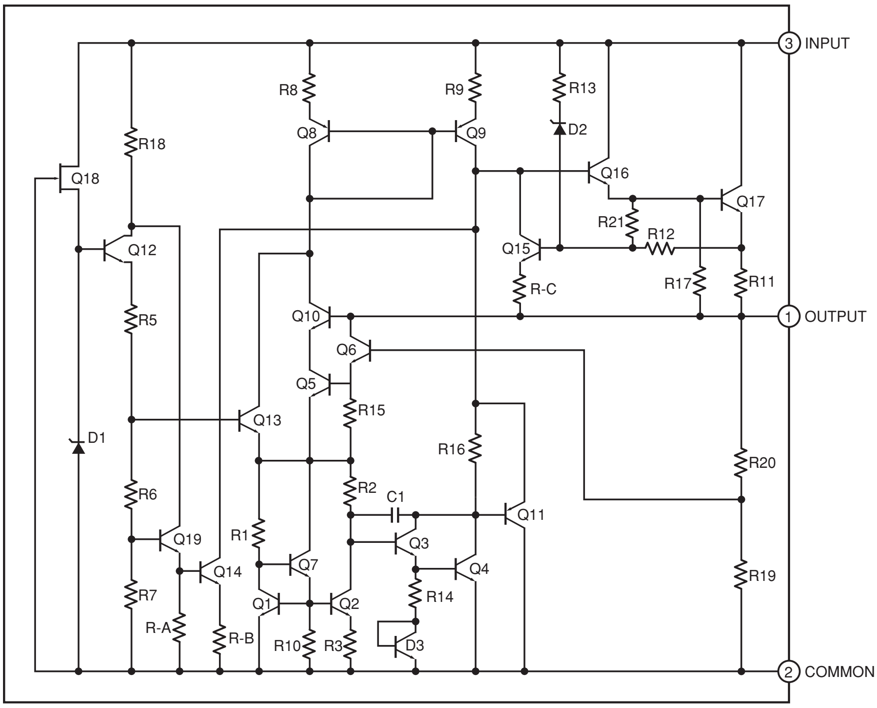


IC441 LC75342M (2 Band Equalizer)

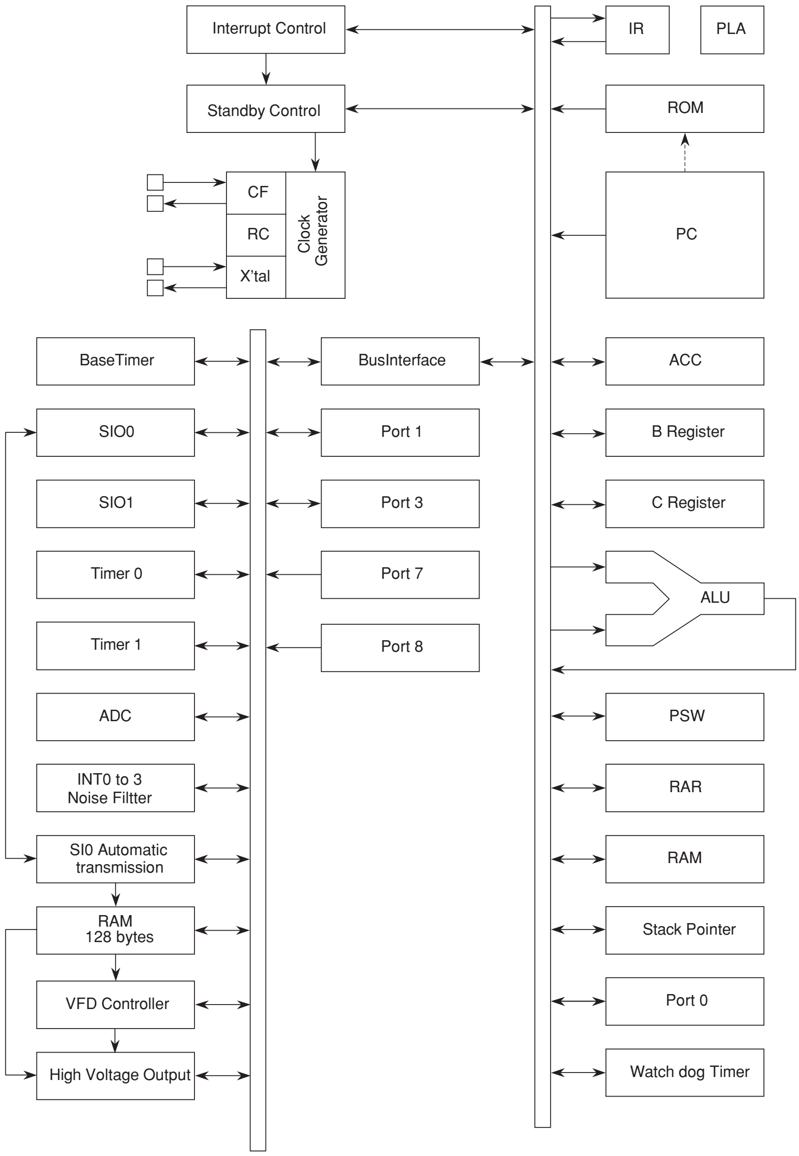


IC BLOCK DIAGRAM & DESCRIPTION

IC446 NJM78M05FA (Stabilized Power Supply)



IC601 LC866540A-51D1 (Micro Processor)

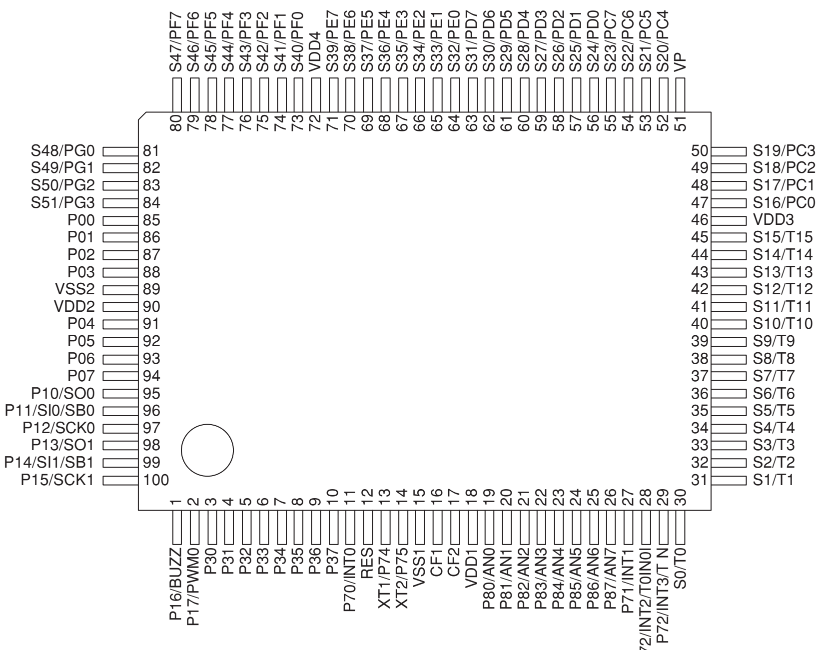


IC BLOCK DIAGRAM & DESCRIPTION

IC601 LC866540A-51D1 (Micro Processor)

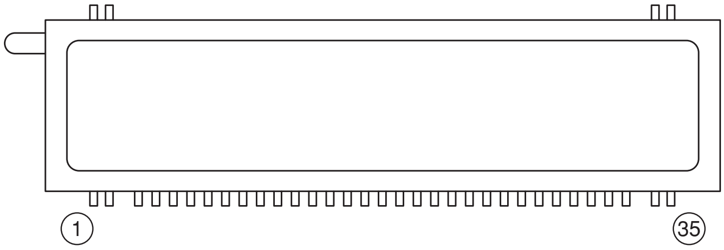
NO.	PIN NAME	NAME	I/O	DESCRIPTION
1	P16/BUZ	JOG+	I	Input JogDial
2	P17/PWM0	JOG-	I	Input JogDial
3	P30	D_CLK	O	Serial clock output for Tu/Vol_Func IC
4	P31	D_OUT	O	Serial date output for Tu/Vol_Func IC
5	P32		O	Open
6	P33		O	Open
7	P34		O	Open
8	P35	VF_CE	O	Serial latch output for Vol_Func IC
9	P36	TU_CE	O	Serial latch output for Tu IC
10	P37	TU_D1	I	Serial date input for Tu IC
11	P70/INT0	PROTECTOR	I	Protect Set (High; Irregular)
12	RES	RESET	I	System Reset pin
13	XT1/P74	XT1	I	Sub clock junction pin
14	XT2/P75	XT2	O	Sub clock junction pin
15	XSS1	VSS		
16	CF1	CF1	I	Main clock junction pin
17	CF2	CF2	O	Main clock junction pin
18	VDD1	VDD		
19	P80/AN0	KEY0	I	
20	P81/AN1	KEY1	I	
21	P82/AN2	SW0	I	CD; Limit SW, Open SW, Close SW
22	P83/AN3		I	Connect to GND
23	P84/AN4		I	Connect to GND
24	P85/AN5		I	Connect to GND
25	P86/AN6		I	Connect to GND
26	P87/AN7		I	Connect to GND
27	P71/INT1	WRQ	I	CD DSP interface(sub Q Request)
28	P72/INT2/T0IN	RDS IN	I	Serial date input for RDS IC
29	P73/INT3/T0IN	IR	I	Remote control input
30	S0/T0		O	Open
31	S1/T1		O	Open
32	S2/T2		O	Open
33	S3/T3		O	Open
34	S4/T4		O	Open
35	S5/T5		O	Open
36	S6/T6		O	FL digit output (10G)
37	S7/T7		O	FL digit output (9G)
38	S8/T8		O	FL digit output (8G)
39	S9/T9		O	FL digit output (7G)
40	S10/T10		O	FL digit output (6G)
41	S11/T11		O	FL digit output (5G)
42	S12/T12		O	FL digit output (4G)
43	S13/T13		O	FL digit output (3G)
44	S14/T14		O	FL digit output (2G)
45	S15/T15		O	FL digit output (1G)
46	VDD3	VDD		
47	S16/PC0		O	FL Segment output (P17)
48	S17/PC1		O	FL Segment output (P16)
49	S18/PC2		O	FL Segment output (P15)
50	S19/PC3		O	FL Segment output (P14)

NO.	PIN NAME	NAME	I/O	DESCRIPTION
51	VP	VP		FL drive output power
52	S20/PC4		O	FL Segment output (P13)
53	S21/PC5		O	FL Segment output (P12)
54	S22/PC6		O	FL Segment output (P11)
55	S23/PC7		O	FL Segment output (P10)
56	S24/PD0		O	FL Segment output (P9)
57	S25/PD1		O	FL Segment output (P8)
58	S26/PD2		O	FL Segment output (P7)
59	S27/PD3		O	FL Segment output (P6)
60	S28/PD4		O	FL Segment output (P5)
61	S29/PD5		O	FL Segment output (P4)
62	S30/PD6		O	FL Segment output (P3)
63	S31/PD7		O	FL Segment output (P2)
64	S32/PE0		O	FL Segment output (P1)
65	S33/PE1		O	Open
66	S34/PE2		O	Open
67	S35/PE3	SEL_POE_RY	I	Power Relay Function Select (High; None)
68	S36/PE4	V_CHK	I	Detection for Power Failure (Low; Power Failure)
69	S37/PE5	C2F	I	DSP C2F input
70	S38/PE6	REEL	I	Reel Rotor Signal Input
71	S39/PE7		I	Connect to GND
72	VDD4	VDD		Power(+5V)
73	S40/PF0	G_REVS	I	Failure record SW (Tape B side) Input
74	S41/PF1	G_FWD	I	Failure record SW (Tape A side) Input
75	S42/PF2	PACK	I	Tape Pack Check Input
76	S43/PF3	TAPE_INI	I	Tape Deck Initialize
77	S44/PF4	POW_RY	O	Power Relay Control Output (High; Relay On)
78	S45/PF5	SP_RY	O	Speaker Relay Control Output (High; Relay On)
79	S46/PF6	LED	O	Light for CD
80	S47/PF7	Moter	O	Tape Moter Output (High; Moter On)
81	S48/PG0	Tape Play PL	O	Tape Play Plunger Output (High; Plunger On)
82	S49/PG1	P_CON	O	Power control (High; Power On)
83	S50/PG2	OSC	O	Control for Oscillation of Tape On/Off (High; Oscillation)
84	S51/PG3	PRE_MUTE	O	Pre Amp Mute Output (High; Mute On)
85	P00	MAIN_MUTE	O	Power Amp Mute Output (Low; Mute on)
86	P01	SURROUND	O	Surround Output Open
87	P02	DSP_RESET	O	Reset Signal for CD DSP
88	P03	CLK_SHIFT	O	Main clock shift
89	VSS2	VSS		Power (GND)
90	VDD2	VDD		Power (+5V)
91	P04	BEAT	O	Beat CCL Control
92	P05	R_Mute	O	Tape Recording Mute (High; Mute On)
93	P06	TRY_OPEN	O	Trey Open Control Output
94	P07	TRY_CLOSE	O	TREY Close Control Output
95	P10/S00	COIN	O	CD_DSP interface(command data output)
96	P11/S10/SB0	SQOUT	I	CD_DSP interface(SubQ data input)
97	P12/SCK0	CQCK	O	CD_DSP interface(clock)
98	P13/S01	VD_GND	O	GND control output for micon power check
99	P14/S11/SB1	DRF	I	DRF signal input
100	P15/SCK1	RWC	O	CD_DSP interface(command latch)



FL DISPLAY DESCRIPTION

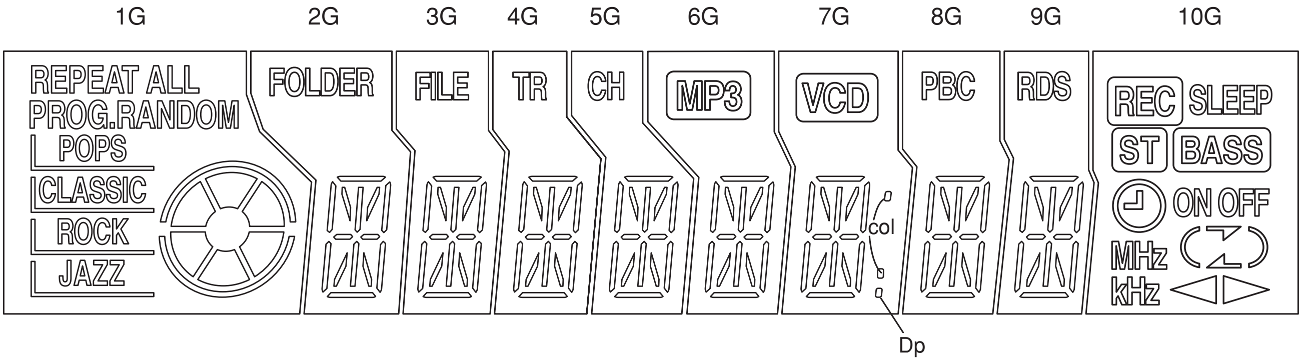
FL601

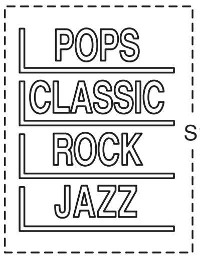


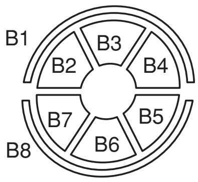
PIN No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
CONNECTION	F1	F1	NP	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G	NX	NX	P1	P2	P3

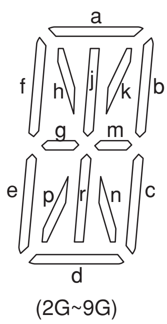
PIN No.	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
CONNECTION	P4	P5	P6	P7	P8	P9	P10	P11	P12	P13	P14	P15	P16	P17	NP	F2	F2

NOTES
1) F1,F2 : Filament
2) G : Grid PIn
3) Pn : Anode Pin
4) NP : No Pin
5) NX : No Extended



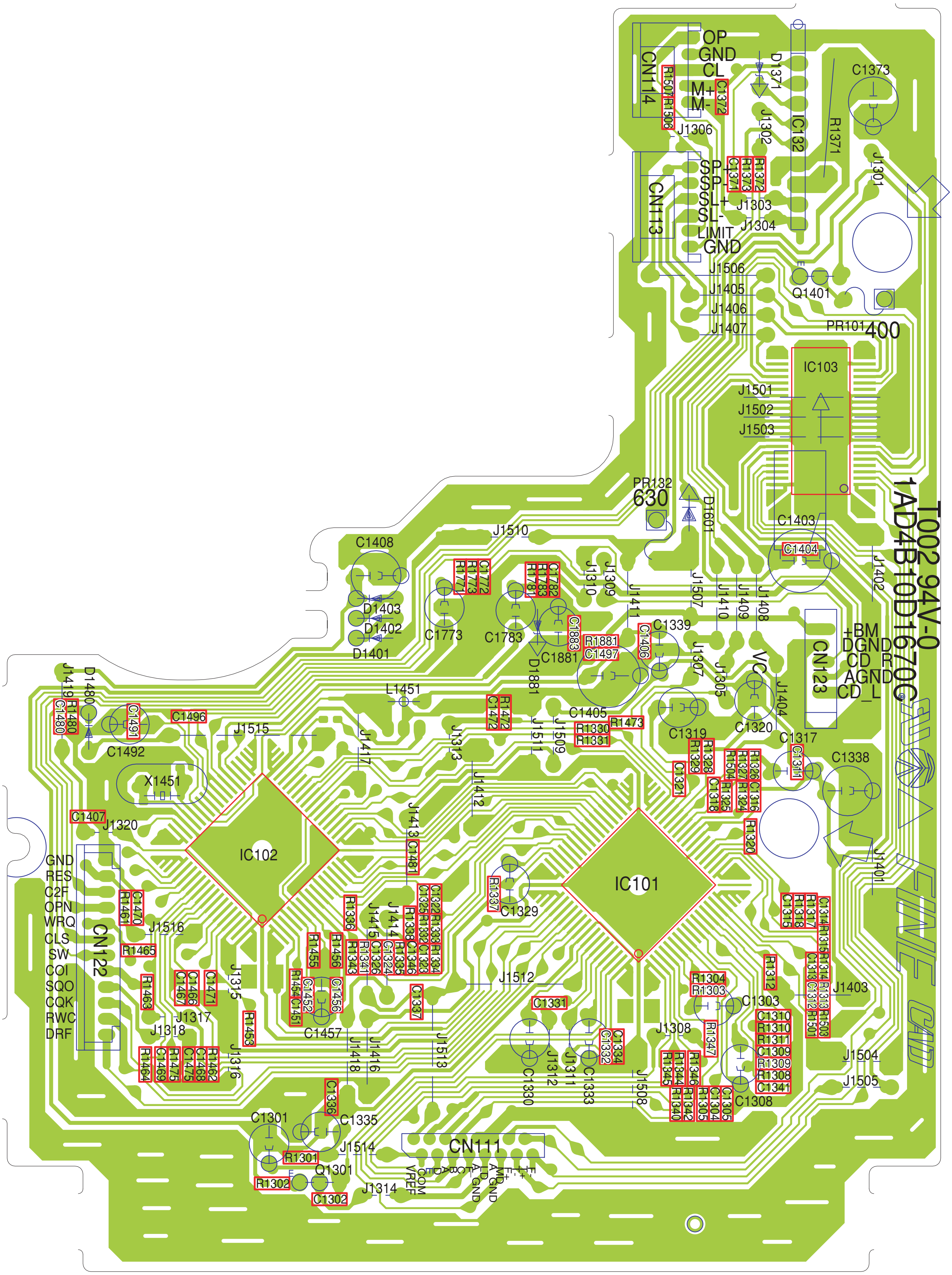




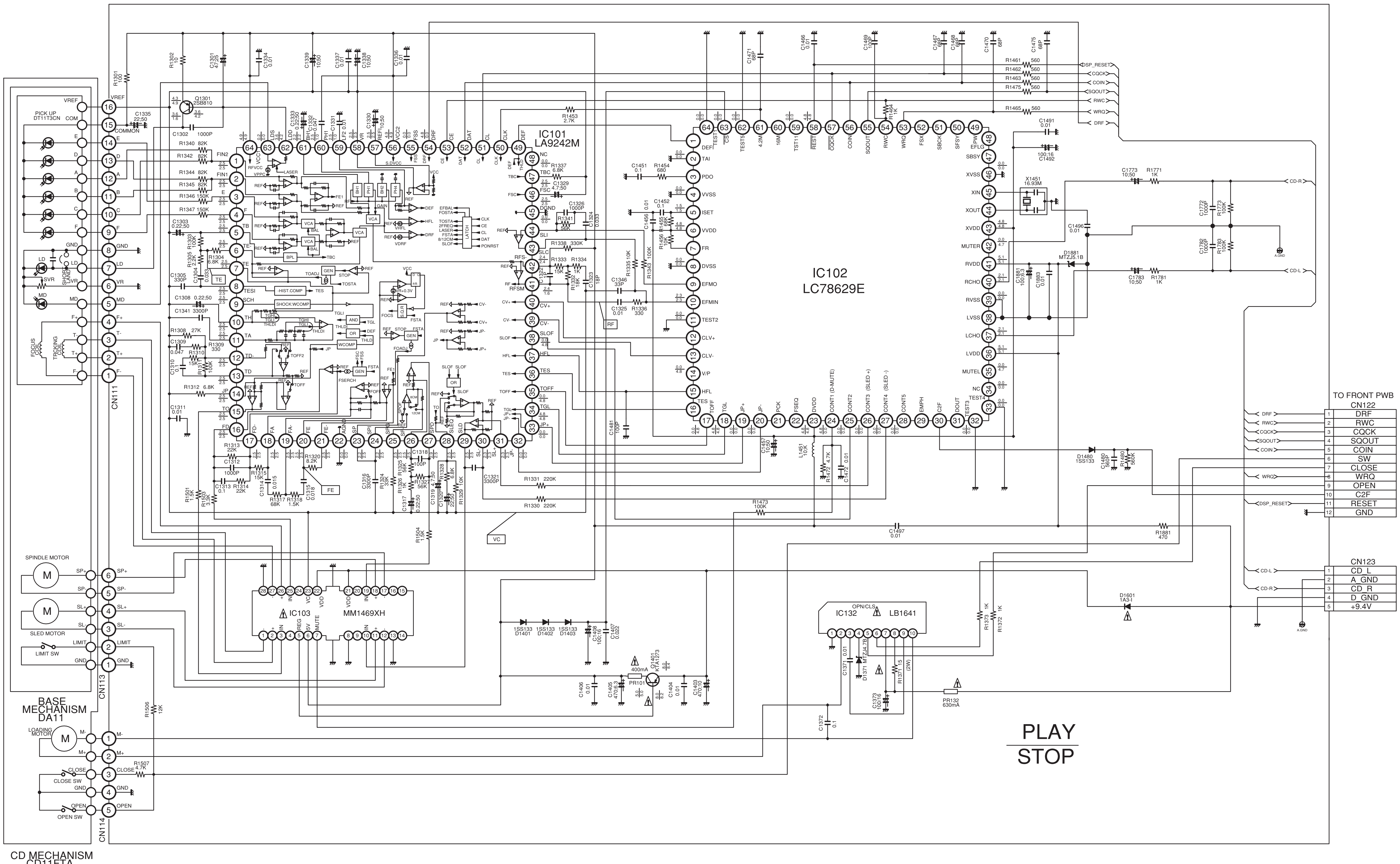


	1G	2G	3G	4G	5G	6G	7G	8G	9G	10G
P1	REPEAT	FOLDER	FILE	TR	CH	MP3	VCD	PBC	RDS	REC
P2	ALL	a	a	a	a	a	a	a	a	SLEEP
P3	PROG.	b	b	b	b	b	b	b	b	ST
P4	RANDOM	f	f	f	f	f	f	f	f	BASS
P5		h	h	h	h	h	h	h	h	ON
P6	(POPS)	j	j	j	j	j	j	j	j	OFF
P7	(CLASSIC)	k	k	k	k	k	k	k	k	(clock)
P8	(ROCK)	g	g	g	g	g	g	g	g	)
P9	(JAZZ)	m	m	m	m	m	m	m	m	(arrow)
P10	B1	-	-	-	-	-	col	-	-	(
P11	B2	c	c	c	c	c	c	c	c	MHz
P12	B3	e	e	e	e	e	e	e	e	▷
P13	B4	p	p	p	p	p	p	p	p	◁
P14	B5	r	r	r	r	r	r	r	r	kHz
P15	B6	n	n	n	n	n	n	n	n	-
P16	B7	d	d	d	d	d	d	d	d	-
P17	B8	-	-	-	-	-	Dp	-	-	-

WIRING DIAGRAM (CD P.W.BOARD ASSY)



This is a basic wiring diagram.

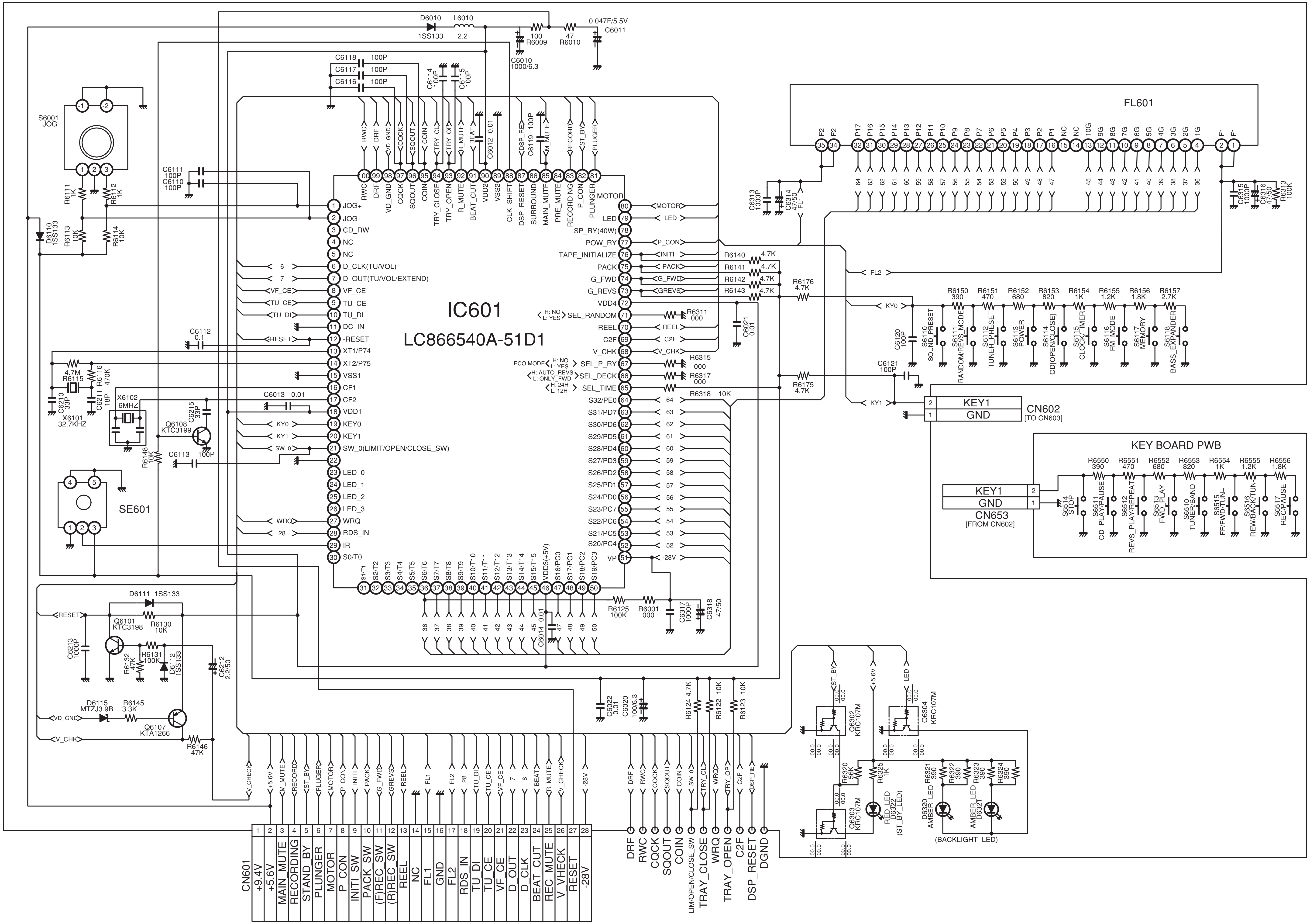


PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ and ⚠ mark in the parts list and the schematic diagram designated components in which safety and performance can be of special significance. When replacing a component identified by ⚠ and ⚠, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual. Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

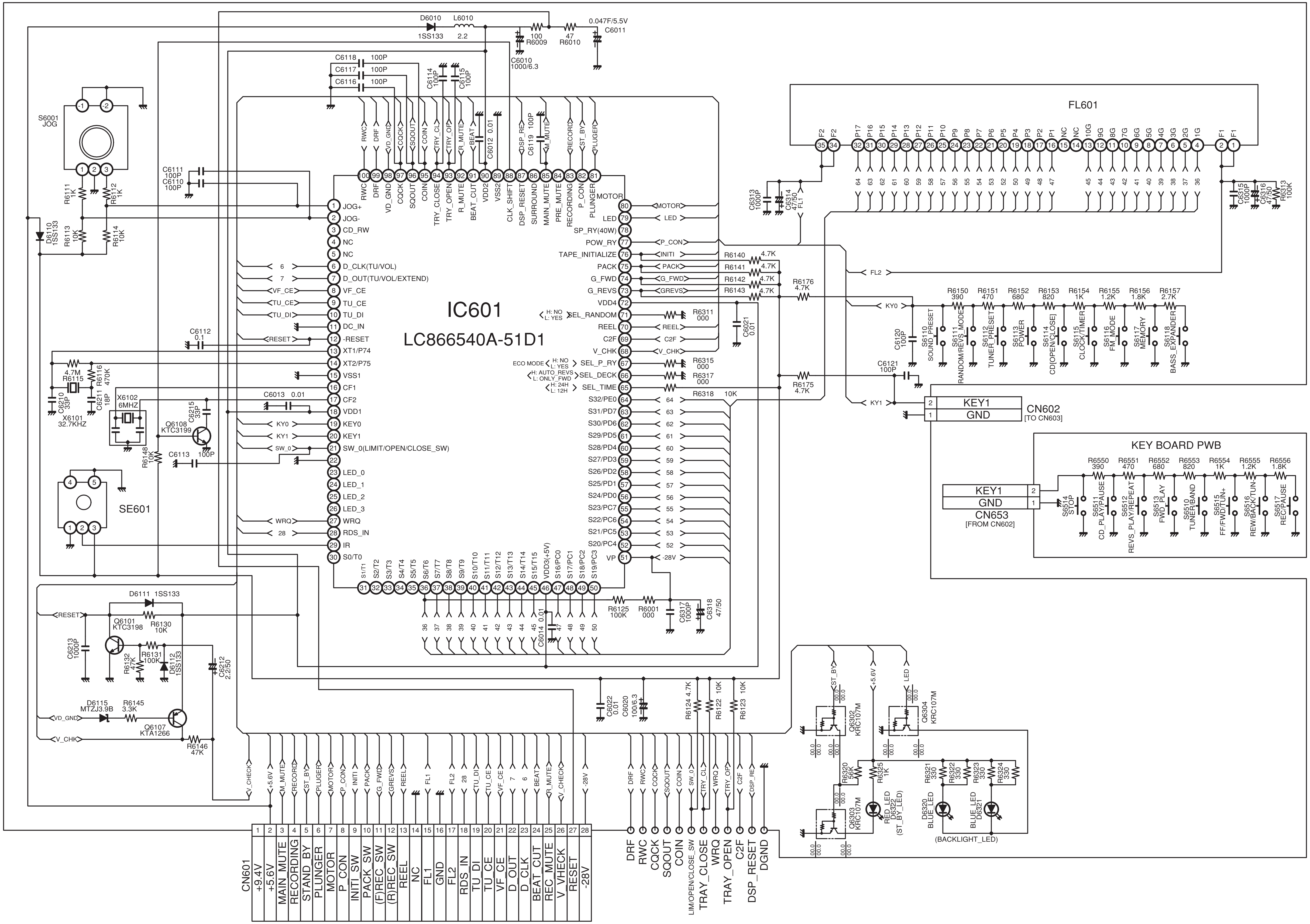
This is a basic schematic diagram.

SCHEMATIC DIAGRAM (FRONT for SL)



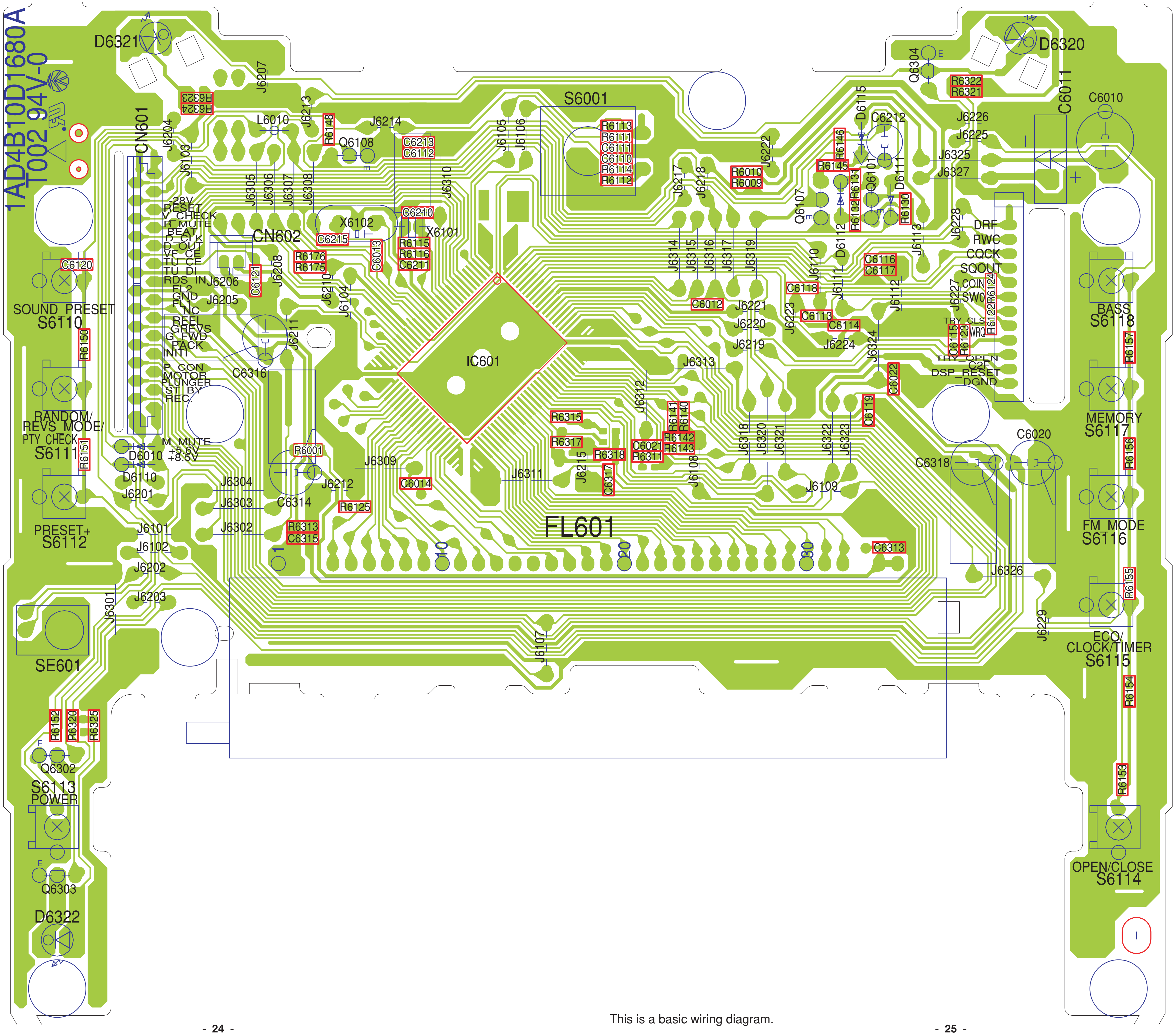
This is a basic schematic diagram.

SCHEMATIC DIAGRAM (FRONT for WH & BK)



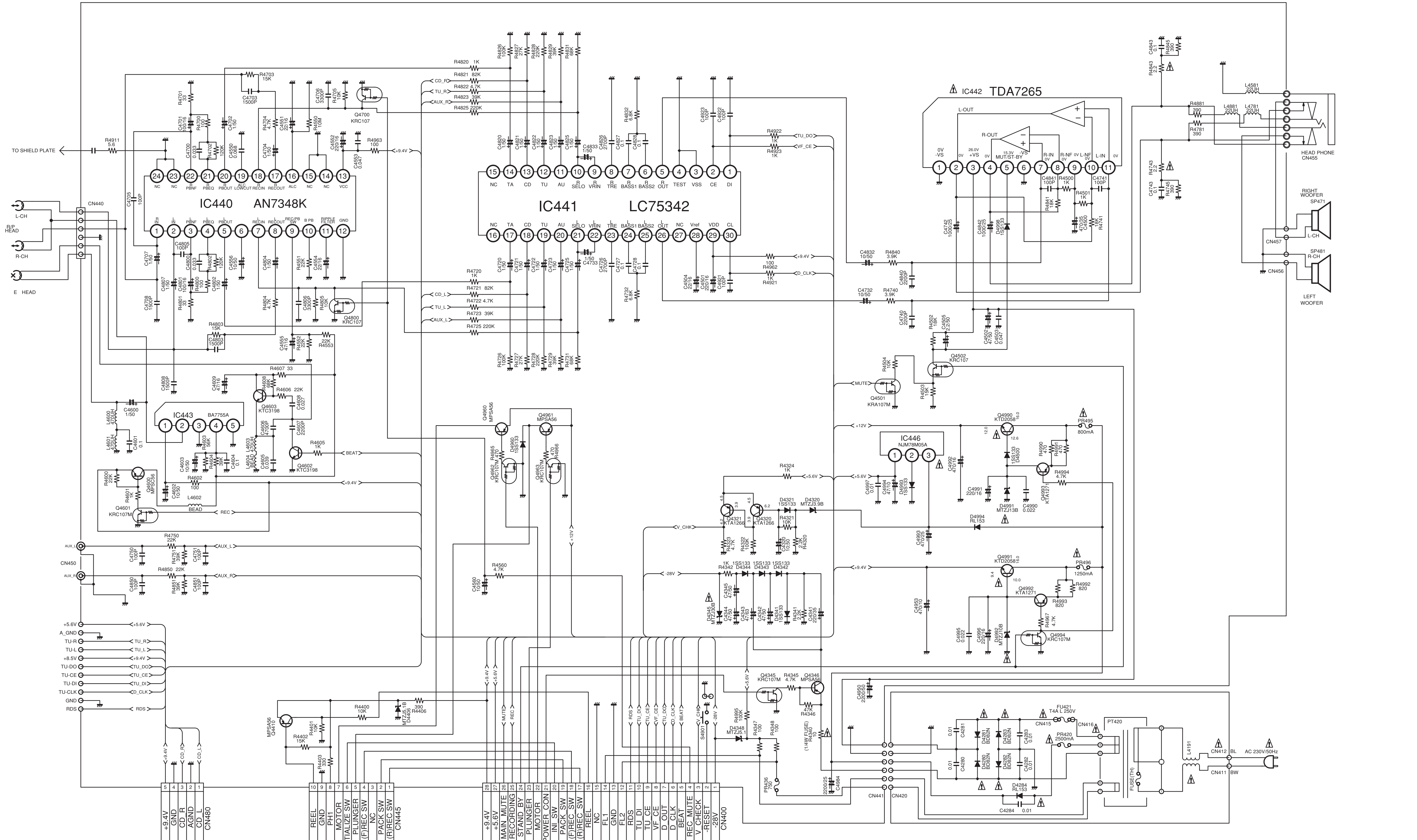
This is a basic schematic diagram.

WIRING DIAGRAM (FRONT P.W.BOARD ASSY)



This is a basic wiring diagram.

SCHEMATIC DIAGRAM (AMPLIFIER)

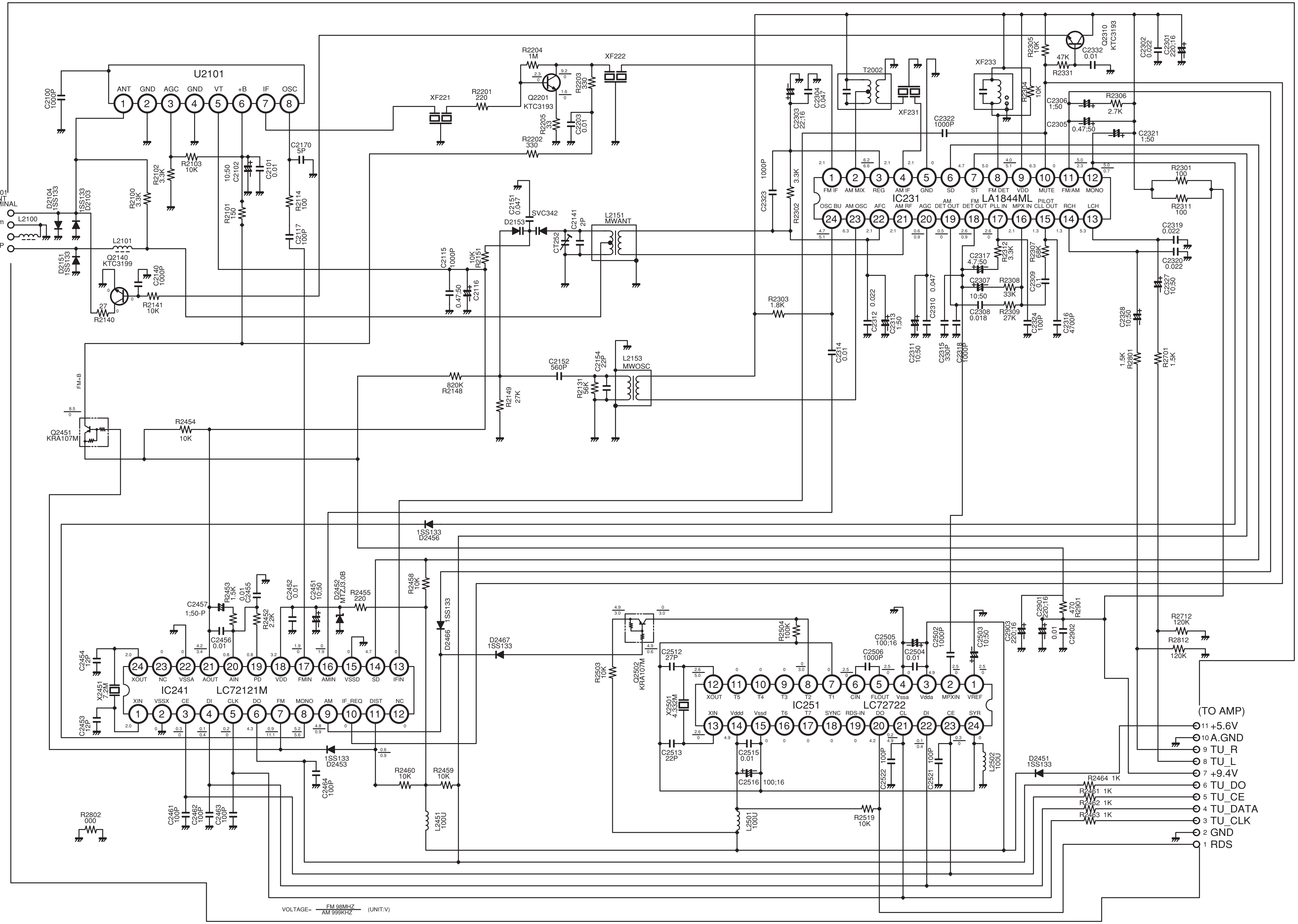


This is a basic schematic diagram.

PRODUCT SAFETY NOTICE

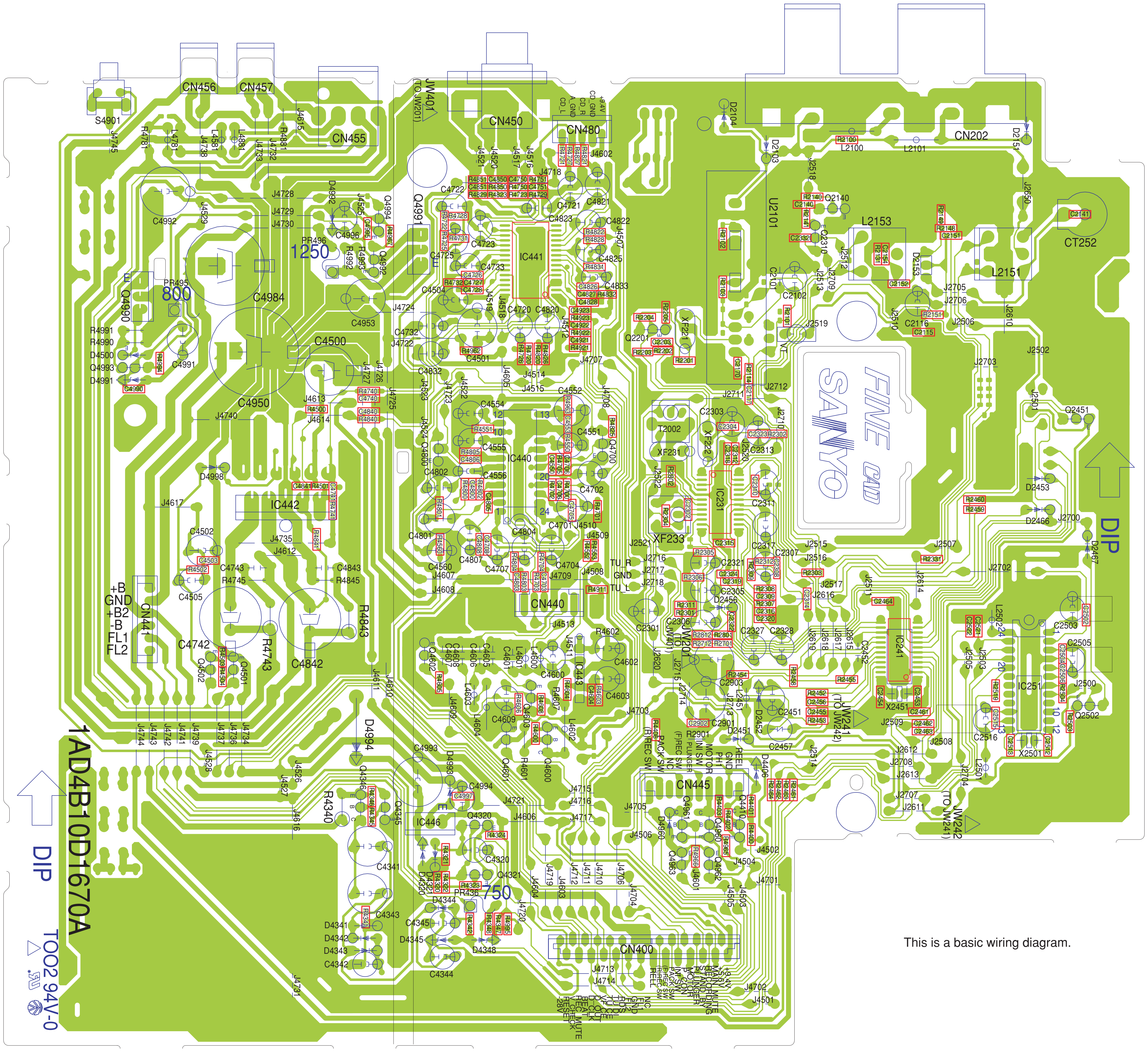
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SCHEMATIC DIAGRAM (TUNER)



This is a basic schematic diagram.

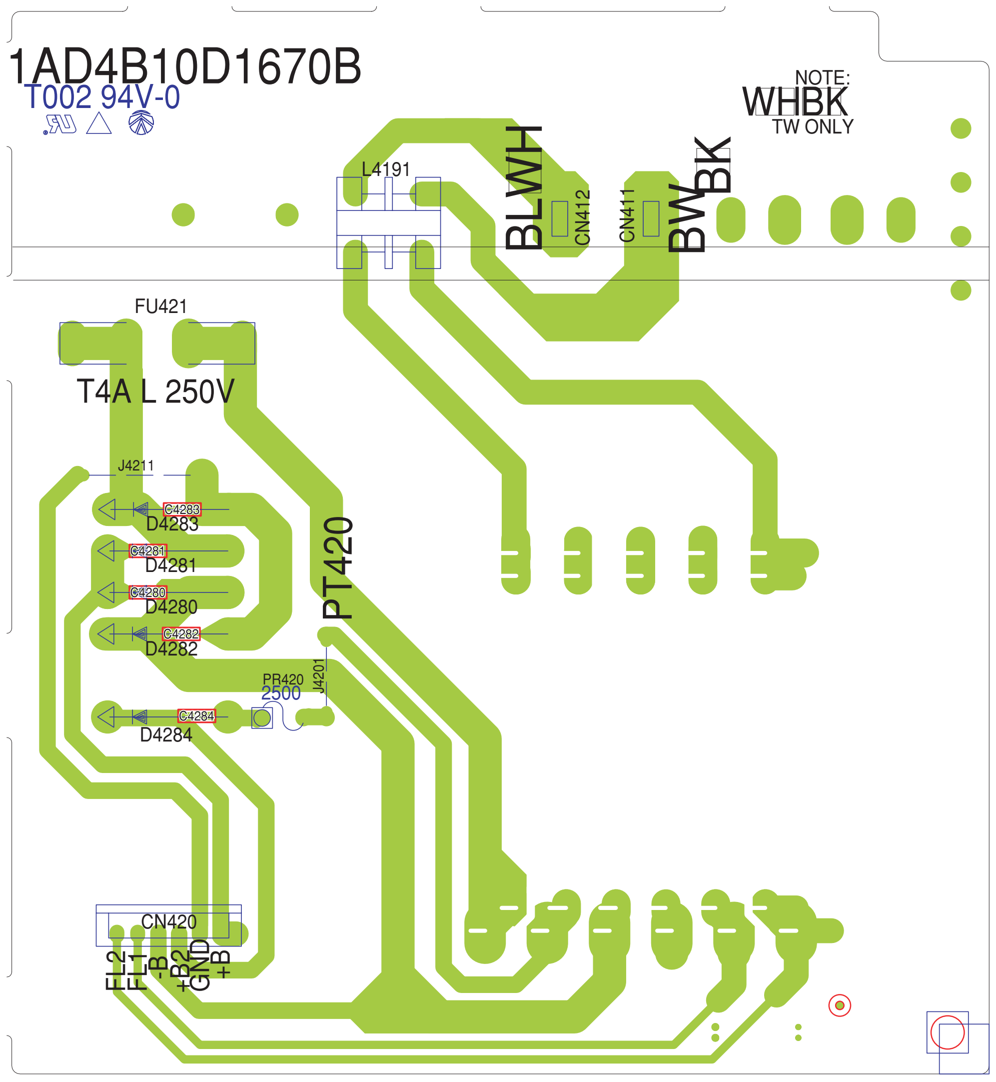
WIRING DIAGRAM (AMPLIFER & TUNER)



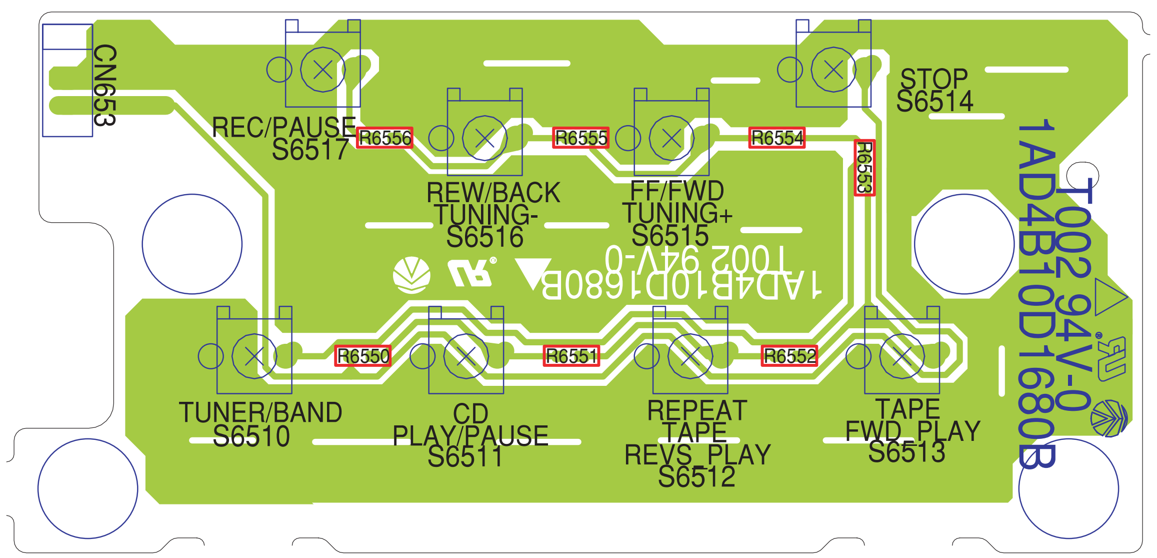
This is a basic wiring diagram.

WIRING DIAGRAM (POWER SUPPLY & KEYBOARD P.W.BOARD)

POWER SUPPLY P.W.BOARD

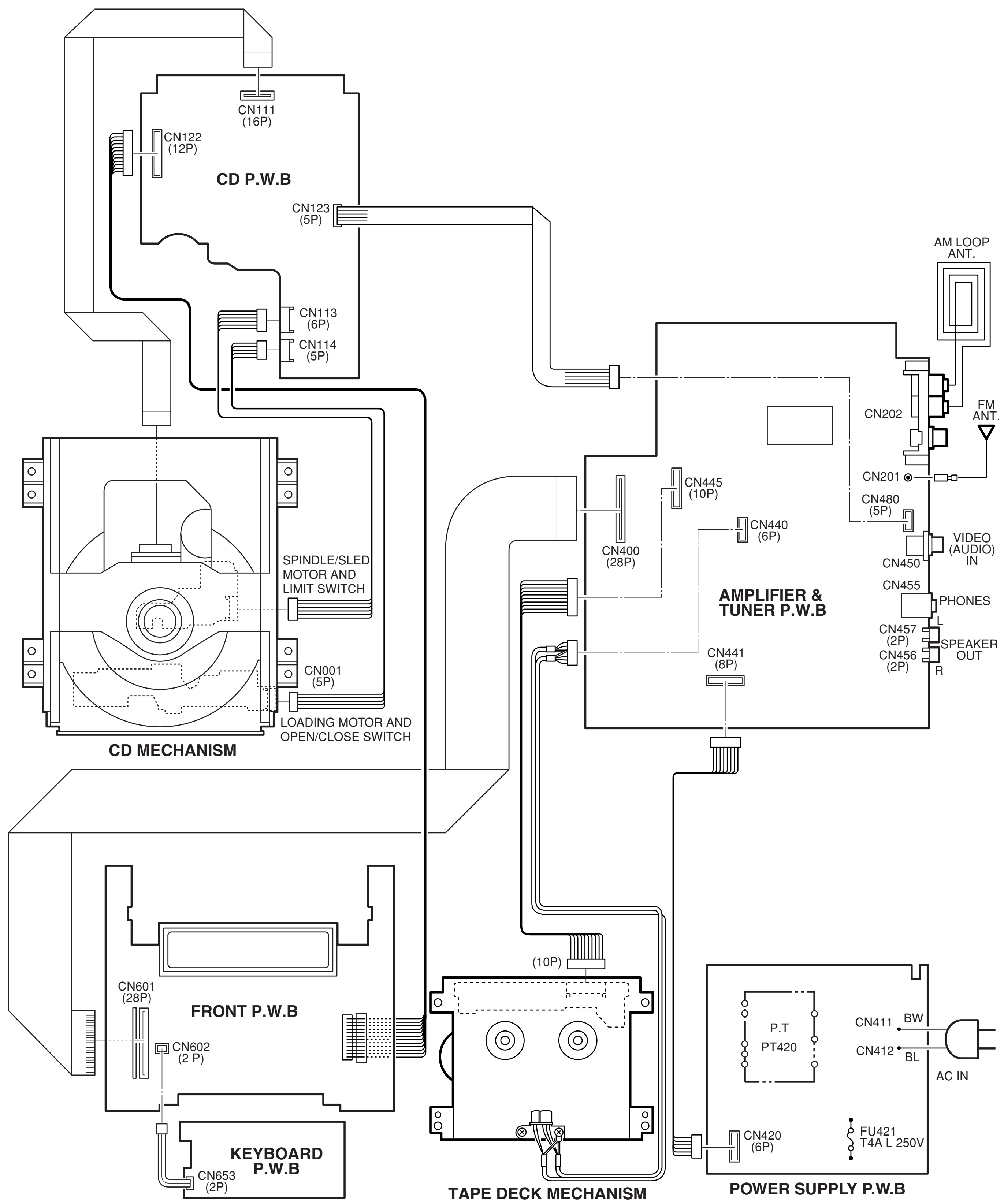


KEYBOARD P.W.BOARD



This is a basic wiring diagram.

WIRING CONNECTION



This is a basic wiring connection.

SANYO

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Osaka, Japan

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